

# Sequence Listing

<110> Baker, Kevin  
 Botstein, David  
 Eaton, Dan  
 Ferrara, Napoleone  
 Filvaroff, Ellen  
 Gerritsen, Mary  
 Goddard, Audrey  
 Godowski, Paul  
 Grimaldi, Christopher  
 Gurney, Austin  
 Hillan, Kenneth  
 Kljavin, Ivar  
 Napier, Mary  
 Roy, Margaret  
 Tumas, Daniel  
 Wood, William

<120> SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC  
 ACIDS ENCODING THE SAME

<130> P2548P1C1

<150> 60/067,411

<151> December 3, 1997

<150> 60/069,334

<151> December 11, 1997

<150> 60/069335

<151> December 11, 1997

<150> 60/069,278

<151> December 11, 1997

<150> 60/069,425

<151> December 12, 1997

<150> 60/069,696

<151> December 16, 1997

<150> 60/069,694

<151> December 16, 1997

<150> 60/069,702

<151> December 16, 1997

<150> 60/069,870

<151> December 17, 1997

<150> 60/069,873

<151> December 17, 1997

<150> 60/068,017

<151> December 18, 1997

<150> 60/070,440

0994403-03001

06541603 06301

<151> February 9, 1998

<151> February 9, 1998

<151> February 25, 1998

<151> December 16, 1998

<151> December 22, 1998

<151> July 28, 1999

<151> September 16, 1998

<151> December 1, 1998

<151> December 16, 1998

<151> December 22, 1998

<151> March 3, 1999

<151> June 22, 1999

<151> September 15, 1999

<151> November 30, 1999

<151> November 30, 1999

<151> December1, 1999

<151> December 16, 1999

[151] February 11, 2000

151> February 22, 2000

<150> PCT/US00/05841  
 <151> March 2, 2000

<150> PCT/US00/08439  
 <151> March 30, 2000

<150> PCT/US00/14042  
 <151> May 22, 2000

<150> PCT/US00/20710  
 <151> July 28, 2000

<150> PCT/US00/32678  
 <151> December 1, 2000

<150> PCT/US01/06520  
 <151> February 28, 2001

<160> 120

<210> 1  
 <211> 2454  
 <212> DNA  
 <213> Homo Sapien

<400> 1  
 ggactaatct gtgggagcag tttattccag tatcaccag ggtgcagcca 50  
 caccaggact gtgttgaagg gtgtttttt tcttttaaata gtaatacctc 100  
 ctcatctttt cttcttacac agtgtctgag aacatttaca ttatagataa 150  
 gtagtacatg gtggataact tctactttta ggaggactac tctcttctga 200  
 cagtcctaga ctggtcttct acactaagac accatgaagg agtatgtgct 250  
 cctattattc ctggctttgt gctctgccaa acccttcttt agcccttcac 300  
 acatcgact gaagaatatg atgctgaagg atatggaaga cacagatgat 350  
 gatgatgatg atgatgatga tgatgatgat gatgaggaca actctctttt 400  
 tccaacaaga gagccaagaa gccattttt tccatttgat ctgtttccaa 450  
 tgtgtccatt tggatgtcag tgctattcac gagttgtaca ttgctcagat 500  
 ttaggtttga cctcagtcac aaccaacatt ccatttgata ctggaatgct 550  
 tgatcttcaa aacaataaaa ttaaggaaat caaagaaaat gatttttaaag 600  
 gactcacttc actttatggt ctgatcctga acaacaaca gctaacgaag 650  
 attcacccaa aagcctttct aaccacaaag aagttgcgaa ggctgtatct 700  
 gtcccacaat caactaagtg aaataccact taatcttccc aaatcattag 750  
 cagaactcag aattcatgaa aataaagtta agaaaataca aaaggacaca 800

ttcaaaggaa tgaatgcttt acacgttttg gaaatgagtg caaacctct 850  
 tgataataat gggatagagc caggggcatt tgaaggggtg acggtgttcc 900  
 atatcagaat tgcagaagca aaactgacct cagttcctaa aggcttacca 950  
 ccaactttat tggagcttca cttagattat aataaaattt caacagtgga 1000  
 acttgaggat tttaaacgat acaaagaact acaaaggctg ggcctaggaa 1050  
 acaacaaaat cacagatata gaaaatggga gtcttgctaa cataccacgt 1100  
 gtgagagaaa tacatttgga aaacaataaa ctaaaaaaaaa tcccttcagg 1150  
 attaccagag ttgaaatacc tccagataat cttccttcat tctaattcaa 1200  
 ttgcaagagt gggagtaaata gacttctgtc caacagtgcc aaagatgaag 1250  
 aaatctttat acagtgcaat aagtttattc aacaaccgg tgaaatactg 1300  
 ggaaatgcaa cctgcaacat ttcgttgtgt tttgagcaga atgagtgttc 1350  
 agcttgggaa ctttggaaatg taataattag taattggtaa tgtccattta 1400  
 atataagatt caaaaatccc tacatttgga atacttgaac tctattaata 1450  
 atggtagtat tataatatac agcaaatac tattctcaag tggtaagtcc 1500  
 actgacttat tttatgacaa gaaatttcaa cggaattttg ccaaactatt 1550  
 gatacataag ggggtgagag aaacaagcat ctattgcagt ttcctttttg 1600  
 cgtacaaatg atcttacata aatctcatgc ttgaccattc ctttcttcat 1650  
 aacaaaaaag taagatattc ggtatttaac actttgttat caagcacatt 1700  
 ttaaaaagaa ctgtactgta aatggaatgc ttgacttagc aaaatttgtg 1750  
 ctctttcatt tgctgttaga aaaacagaat taacaaagac agtaatgtga 1800  
 agagtgcatt acactattct tattctttag taacttgggt agtactgtaa 1850  
 tatttttaat catcttaaag tatgatttga tataatctta ttgaaattac 1900  
 cttatcatgt cttagagccc gtctttatgt ttaaaactaa tttcttaaaa 1950  
 taaagccttc agtaaattgtt cattaccaac ttgataaatg ctactcataa 2000  
 gagctggttt ggggctatag catatgcttt ttttttttta attattacct 2050  
 gatttaaaaa tctctgtaaa aacgtgtagt gtttcataaa atctgtaact 2100  
 cgcattttta tgatccgcta ttataagctt ttaatagcat gaaaattgtt 2150  
 aggctatata acattgccac ttcaactcta aggaatattt ttgagatata 2200  
 cctttggaag accttgcttg gaagagcctg gacactaaca attctacacc 2250

09443-0601

|         |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <400> 2 | Met | Lys | Glu | Tyr | Val | Leu | Leu | Leu | Phe | Leu | Ala | Leu | Cys | Ser | Ala |
|         | 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |
| Lys     | Pro | Phe | Phe | Ser | Pro | Ser | His | Ile | Ala | Leu | Lys | Asn | Met | Met |     |
|         |     |     |     | 20  |     |     |     |     | 25  |     |     |     |     |     | 30  |
| Leu     | Lys | Asp | Met | Glu | Asp | Thr | Asp | Asp | Asp | Asp | Asp | Asp | Asp | Asp |     |
|         |     |     |     | 35  |     |     |     |     | 40  |     |     |     |     |     | 45  |
| Asp     | Asp | Asp | Asp | Asp | Glu | Asp | Asn | Ser | Leu | Phe | Pro | Thr | Arg | Glu |     |
|         |     |     |     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |
| Pro     | Arg | Ser | His | Phe | Phe | Pro | Phe | Asp | Leu | Phe | Pro | Met | Cys | Pro |     |
|         |     |     |     | 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |
| Phe     | Gly | Cys | Gln | Cys | Tyr | Ser | Arg | Val | Val | His | Cys | Ser | Asp | Leu |     |
|         |     |     |     | 80  |     |     |     |     | 85  |     |     |     |     | 90  |     |
| Gly     | Leu | Thr | Ser | Val | Pro | Thr | Asn | Ile | Pro | Phe | Asp | Thr | Arg | Met |     |
|         |     |     |     | 95  |     |     |     |     | 100 |     |     |     |     | 105 |     |
| Leu     | Asp | Leu | Gln | Asn | Asn | Lys | Ile | Lys | Glu | Ile | Lys | Glu | Asn | Asp |     |
|         |     |     |     | 110 |     |     |     |     | 115 |     |     |     |     | 120 |     |
| Phe     | Lys | Gly | Leu | Thr | Ser | Leu | Tyr | Gly | Leu | Ile | Leu | Asn | Asn | Asn |     |
|         |     |     |     | 125 |     |     |     |     | 130 |     |     |     |     | 135 |     |
| Lys     | Leu | Thr | Lys | Ile | His | Pro | Lys | Ala | Phe | Leu | Thr | Thr | Lys | Lys |     |
|         |     |     |     | 140 |     |     |     |     | 145 |     |     |     |     | 150 |     |
| Leu     | Arg | Arg | Leu | Tyr | Leu | Ser | His | Asn | Gln | Leu | Ser | Glu | Ile | Pro |     |
|         |     |     |     | 155 |     |     |     |     | 160 |     |     |     |     | 165 |     |
| Leu     | Asn | Leu | Pro | Lys | Ser | Leu | Ala | Glu | Leu | Arg | Ile | His | Glu | Asn |     |
|         |     |     |     | 170 |     |     |     |     | 175 |     |     |     |     | 180 |     |
| Lys     | Val | Lys | Lys | Ile | Gln | Lys | Asp | Thr | Phe | Lys | Gly | Met | Asn | Ala |     |
|         |     |     |     | 185 |     |     |     |     | 190 |     |     |     |     | 195 |     |
| Leu     | His | Val | Leu | Glu | Met | Ser | Ala | Asn | Pro | Leu | Asp | Asn | Asn | Gly |     |
|         |     |     |     | 200 |     |     |     |     | 205 |     |     |     |     | 210 |     |

09944403-083001

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Glu | Pro | Gly | Ala | Phe | Glu | Gly | Val | Thr | Val | Phe | His | Ile | Arg |
|     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     | 225 |
| Ile | Ala | Glu | Ala | Lys | Leu | Thr | Ser | Val | Pro | Lys | Gly | Leu | Pro | Pro |
|     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |
| Thr | Leu | Leu | Glu | Leu | His | Leu | Asp | Tyr | Asn | Lys | Ile | Ser | Thr | Val |
|     |     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |
| Glu | Leu | Glu | Asp | Phe | Lys | Arg | Tyr | Lys | Glu | Leu | Gln | Arg | Leu | Gly |
|     |     |     |     | 260 |     |     |     |     | 265 |     |     |     |     | 270 |
| Leu | Gly | Asn | Asn | Lys | Ile | Thr | Asp | Ile | Glu | Asn | Gly | Ser | Leu | Ala |
|     |     |     |     | 275 |     |     |     |     | 280 |     |     |     |     | 285 |
| Asn | Ile | Pro | Arg | Val | Arg | Glu | Ile | His | Leu | Glu | Asn | Asn | Lys | Leu |
|     |     |     |     | 290 |     |     |     |     | 295 |     |     |     |     | 300 |
| Lys | Lys | Ile | Pro | Ser | Gly | Leu | Pro | Glu | Leu | Lys | Tyr | Leu | Gln | Ile |
|     |     |     |     | 305 |     |     |     |     | 310 |     |     |     |     | 315 |
| Ile | Phe | Leu | His | Ser | Asn | Ser | Ile | Ala | Arg | Val | Gly | Val | Asn | Asp |
|     |     |     |     | 320 |     |     |     |     | 325 |     |     |     |     | 330 |
| Phe | Cys | Pro | Thr | Val | Pro | Lys | Met | Lys | Lys | Ser | Leu | Tyr | Ser | Ala |
|     |     |     |     | 335 |     |     |     |     | 340 |     |     |     |     | 345 |
| Ile | Ser | Leu | Phe | Asn | Asn | Pro | Val | Lys | Tyr | Trp | Glu | Met | Gln | Pro |
|     |     |     |     | 350 |     |     |     |     | 355 |     |     |     |     | 360 |
| Ala | Thr | Phe | Arg | Cys | Val | Leu | Ser | Arg | Met | Ser | Val | Gln | Leu | Gly |
|     |     |     |     | 365 |     |     |     |     | 370 |     |     |     |     | 375 |
| Asn | Phe | Gly | Met |     |     |     |     |     |     |     |     |     |     |     |

<210> 3  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide Probe  
  
 <400> 3  
 ggaaatgagt gcaaaccctc 20  
  
 <210> 4  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide Probe  
  
 <400> 4  
 tcccaagctg aacactcatt ctgc 24

<210> 5  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic Oligonucleotide Probe

<400> 5  
gggtgacggt gttccatata agaattgcag aagcaaaact gacctcagtt 50

<210> 6  
<211> 3441  
<212> DNA  
<213> Homo Sapien

<400> 6  
cggacgcgtg ggcggacgcg tgggcccgcg gcaccgcccc cggcccggcc 50  
ctccgccctc cgcaactcgcg cctccctccc tccgcccgtt cccgcgcctt 100  
cctccctccc tctcccccag ctgtcccgtt cgcgtcatgc cgagcctccc 150  
ggccccgcgcg gccccgctgc tgcctcctcg gctgctgctg ctcggctccc 200  
ggccggccccg cggcgccggc ccagagcccc ccgtgctgcc catccgttct 250  
gagaaggagc cgctgcccgt tccgggagcg gcaggctgca ccttcggcgg 300  
gaagggtctat gccttgagcg agacgtggca cccggaccta gggcagccat 350  
tcggggtgat gcgctgcgtg ctgtgcgctt gcgaggcgcc tcagtggggt 400  
cgccgtacca ggggccctgg cagggtcagc tgcaagaaca tcaaaccaga 450  
gtgcccacc ccggcctgtg ggcagccgcg ccagctgccg ggacactgct 500  
gccagacctg cccccaggag cgcagcagtt cggagcggca gccgagcggc 550  
ctgtccttcg agtatccgcg ggacccggag catcgagtt atagcgaccg 600  
cggggagcca ggcgtgagg agcgggcccg tggtagcggc cacacggact 650  
tcgtggcgct gctgacaggg ccgaggtcgc aggcggtggc acgagcccga 700  
gtctcgctgc tgcgtctag cctccgcttc tctatctcct acaggcggct 750  
ggaccgccct accaggatcc gcttctcaga ctccaatggc agtgtcctgt 800  
ttgagcacc tgcagcccc acccaagatg gcctggctctg tggggtgtgg 850  
cgggcagtgc ctcggttgct tctgcggctc cttagggcag aacagctgca 900  
tgtggcactt gtgacactca ctacccttc aggggaggtc tgggggcctc 950  
tcacccggca ccgggccctg gctgcagaga ccttcagtgc catcctgact 1000  
ctagaaggcc cccacagca gggcgtaggg ggcacaccc tgctcactct 1050

09944403-083001

094403.033001

cagtgcacaca gaggactcct tgcatttttt gctgctcttc cgagggctgc 1100  
tggaacccag gagtggggga ctaacccagg ttcccttgag gctccagatt 1150  
ctacaccagg ggcagctact gcgagaactt caggccaatg tctcagccca 1200  
ggaaccaggc tttgctgagg tgctgcccac cctgacagtc caggagatgg 1250  
actggctggg gctgggggag ctgcagatgg ccctggagtg ggcaggcagg 1300  
ccagggctgc gcatcagtg acacattgct gccaggaaga gctgagacgt 1350  
cctgcaaagt gtcccttggt gggctgatgc cctgatccca gtccagacgg 1400  
gtgctgccgg ctcagccagc ctcacgtgc taggaaatgg ctccctgatc 1450  
tatcaggtgc aagtggtagg gacaagcagt gaggtggtag ccatgacact 1500  
ggagaccaag cctcagcggg gggatcagcg cactgtcctg tgccacatgg 1550  
ctggactcca gccaggagga cacacggcgg tgggtatctg ccctgggctg 1600  
gggtcccag gggctcatat gctgctgcag aatgagctct tctgaacgt 1650  
gggcaccaag gacttcccag acggagagct tcgggggcac gtggctgcc 1700  
tgccctactg tgggcatagc gcccgccatg acacgtgcc cgtgcccta 1750  
gcaggagccc tgggtgtacc ccctgtgaag agccaagcag cagggcacgc 1800  
ctggctttcc ttggataccc actgtcacct gcactatgaa gtgctgctgg 1850  
ctgggcttgg tggctcagaa caaggcactg tcaactgcca cctccttggg 1900  
cctcctggaa cgccagggcc tcggcggtg ctgaagggat tctatggctc 1950  
agaggccag ggtgtggtga aggacctgga gccggaactg ctgcggcacc 2000  
tggcaaaagg catggcctcc ctgatgatca ccaccaagg tagccccaga 2050  
ggggagctcc gagggcaggt gcacatagcc aaccaatgtg aggttggcgg 2100  
actgcgctg gaggcggccg gggccgagg ggtgcggcg ctgggggctc 2150  
cggatacagc ctctgctgc cgccctgtgg tgccctgtct cccggcccta 2200  
gcgcccgcga aacctggtg tcttggcgcg ccccgagacc ccaacacatg 2250  
cttcttcgag gggcagcagc gccccacgg ggctcgctgg gcgcccact 2300  
acgacccgct ctgctcactc tgcacctgcc agagacgaac ggtgatctgt 2350  
gaccgggtg tgtgcccacc gccagctgc ccacacccgg tgcaggctcc 2400  
cgaccagtgc tgccctgttt gccctgagaa acaagatgtc agagacttgc 2450  
cagggtgcc aaggagccgg gaccaggag agggctgcta ttttgatgg 2500





|     |     |     |     |            |     |     |     |     |            |     |     |     |     |            |
|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|
| Arg | Cys | Val | Leu | Cys<br>80  | Ala | Cys | Glu | Ala | Pro<br>85  | Gln | Trp | Gly | Arg | Arg<br>90  |
| Thr | Arg | Gly | Pro | Gly<br>95  | Arg | Val | Ser | Cys | Lys<br>100 | Asn | Ile | Lys | Pro | Glu<br>105 |
| Cys | Pro | Thr | Pro | Ala<br>110 | Cys | Gly | Gln | Pro | Arg<br>115 | Gln | Leu | Pro | Gly | His<br>120 |
| Cys | Cys | Gln | Thr | Cys<br>125 | Pro | Gln | Glu | Arg | Ser<br>130 | Ser | Ser | Glu | Arg | Gln<br>135 |
| Pro | Ser | Gly | Leu | Ser<br>140 | Phe | Glu | Tyr | Pro | Arg<br>145 | Asp | Pro | Glu | His | Arg<br>150 |
| Ser | Tyr | Ser | Asp | Arg<br>155 | Gly | Glu | Pro | Gly | Ala<br>160 | Glu | Glu | Arg | Ala | Arg<br>165 |
| Gly | Asp | Gly | His | Thr<br>170 | Asp | Phe | Val | Ala | Leu<br>175 | Leu | Thr | Gly | Pro | Arg<br>180 |
| Ser | Gln | Ala | Val | Ala<br>185 | Arg | Ala | Arg | Val | Ser<br>190 | Leu | Leu | Arg | Ser | Ser<br>195 |
| Leu | Arg | Phe | Ser | Ile<br>200 | Ser | Tyr | Arg | Arg | Leu<br>205 | Asp | Arg | Pro | Thr | Arg<br>210 |
| Ile | Arg | Phe | Ser | Asp<br>215 | Ser | Asn | Gly | Ser | Val<br>220 | Leu | Phe | Glu | His | Pro<br>225 |
| Ala | Ala | Pro | Thr | Gln<br>230 | Asp | Gly | Leu | Val | Cys<br>235 | Gly | Val | Trp | Arg | Ala<br>240 |
| Val | Pro | Arg | Leu | Ser<br>245 | Leu | Arg | Leu | Leu | Arg<br>250 | Ala | Glu | Gln | Leu | His<br>255 |
| Val | Ala | Leu | Val | Thr<br>260 | Leu | Thr | His | Pro | Ser<br>265 | Gly | Glu | Val | Trp | Gly<br>270 |
| Pro | Leu | Ile | Arg | His<br>275 | Arg | Ala | Leu | Ala | Ala<br>280 | Glu | Thr | Phe | Ser | Ala<br>285 |
| Ile | Leu | Thr | Leu | Glu<br>290 | Gly | Pro | Pro | Gln | Gln<br>295 | Gly | Val | Gly | Gly | Ile<br>300 |
| Thr | Leu | Leu | Thr | Leu<br>305 | Ser | Asp | Thr | Glu | Asp<br>310 | Ser | Leu | His | Phe | Leu<br>315 |
| Leu | Leu | Phe | Arg | Gly<br>320 | Leu | Leu | Glu | Pro | Arg<br>325 | Ser | Gly | Gly | Leu | Thr<br>330 |
| Gln | Val | Pro | Leu | Arg<br>335 | Leu | Gln | Ile | Leu | His<br>340 | Gln | Gly | Gln | Leu | Leu<br>345 |
| Arg | Glu | Leu | Gln | Ala<br>350 | Asn | Val | Ser | Ala | Gln<br>355 | Glu | Pro | Gly | Phe | Ala<br>360 |
| Glu | Val | Leu | Pro | Asn        | Leu | Thr | Val | Gln | Glu        | Met | Asp | Trp | Leu | Val        |

|     |     |     |     |            |     |     |     |     |            |     |     |     |     |            |
|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|
|     |     |     |     | 365        |     |     |     |     | 370        |     |     |     |     | 375        |
| Leu | Gly | Glu | Leu | Gln<br>380 | Met | Ala | Leu | Glu | Trp<br>385 | Ala | Gly | Arg | Pro | Gly<br>390 |
| Leu | Arg | Ile | Ser | Gly<br>395 | His | Ile | Ala | Ala | Arg<br>400 | Lys | Ser | Cys | Asp | Val<br>405 |
| Leu | Gln | Ser | Val | Leu<br>410 | Cys | Gly | Ala | Asp | Ala<br>415 | Leu | Ile | Pro | Val | Gln<br>420 |
| Thr | Gly | Ala | Ala | Gly<br>425 | Ser | Ala | Ser | Leu | Thr<br>430 | Leu | Leu | Gly | Asn | Gly<br>435 |
| Ser | Leu | Ile | Tyr | Gln<br>440 | Val | Gln | Val | Val | Gly<br>445 | Thr | Ser | Ser | Glu | Val<br>450 |
| Val | Ala | Met | Thr | Leu<br>455 | Glu | Thr | Lys | Pro | Gln<br>460 | Arg | Arg | Asp | Gln | Arg<br>465 |
| Thr | Val | Leu | Cys | His<br>470 | Met | Ala | Gly | Leu | Gln<br>475 | Pro | Gly | Gly | His | Thr<br>480 |
| Ala | Val | Gly | Ile | Cys<br>485 | Pro | Gly | Leu | Gly | Ala<br>490 | Arg | Gly | Ala | His | Met<br>495 |
| Leu | Leu | Gln | Asn | Glu<br>500 | Leu | Phe | Leu | Asn | Val<br>505 | Gly | Thr | Lys | Asp | Phe<br>510 |
| Pro | Asp | Gly | Glu | Leu<br>515 | Arg | Gly | His | Val | Ala<br>520 | Ala | Leu | Pro | Tyr | Cys<br>525 |
| Gly | His | Ser | Ala | Arg<br>530 | His | Asp | Thr | Leu | Pro<br>535 | Val | Pro | Leu | Ala | Gly<br>540 |
| Ala | Leu | Val | Leu | Pro<br>545 | Pro | Val | Lys | Ser | Gln<br>550 | Ala | Ala | Gly | His | Ala<br>555 |
| Trp | Leu | Ser | Leu | Asp<br>560 | Thr | His | Cys | His | Leu<br>565 | His | Tyr | Glu | Val | Leu<br>570 |
| Leu | Ala | Gly | Leu | Gly<br>575 | Gly | Ser | Glu | Gln | Gly<br>580 | Thr | Val | Thr | Ala | His<br>585 |
| Leu | Leu | Gly | Pro | Pro<br>590 | Gly | Thr | Pro | Gly | Pro<br>595 | Arg | Arg | Leu | Leu | Lys<br>600 |
| Gly | Phe | Tyr | Gly | Ser<br>605 | Glu | Ala | Gln | Gly | Val<br>610 | Val | Lys | Asp | Leu | Glu<br>615 |
| Pro | Glu | Leu | Leu | Arg<br>620 | His | Leu | Ala | Lys | Gly<br>625 | Met | Ala | Ser | Leu | Met<br>630 |
| Ile | Thr | Thr | Lys | Gly<br>635 | Ser | Pro | Arg | Gly | Glu<br>640 | Leu | Arg | Gly | Gln | Val<br>645 |
| His | Ile | Ala | Asn | Gln<br>650 | Cys | Glu | Val | Gly | Gly<br>655 | Leu | Arg | Leu | Glu | Ala<br>660 |

|   |     |     |     |
|---|-----|-----|-----|
| Ala Gly Ala Glu Gly Val Arg Ala Leu Gly Ala Pro Asp Thr Ala | 665 | 670 | 675 |
| Ser Ala Ala Pro Pro Val Val Pro Gly Leu Pro Ala Leu Ala Pro | 680 | 685 | 690 |
| Ala Lys Pro Gly Gly Pro Gly Arg Pro Arg Asp Pro Asn Thr Cys | 695 | 700 | 705 |
| Phe Phe Glu Gly Gln Gln Arg Pro His Gly Ala Arg Trp Ala Pro | 710 | 715 | 720 |
| Asn Tyr Asp Pro Leu Cys Ser Leu Cys Thr Cys Gln Arg Arg Thr | 725 | 730 | 735 |
| Val Ile Cys Asp Pro Val Val Cys Pro Pro Pro Ser Cys Pro His | 740 | 745 | 750 |
| Pro Val Gln Ala Pro Asp Gln Cys Cys Pro Val Cys Pro Glu Lys | 755 | 760 | 765 |
| Gln Asp Val Arg Asp Leu Pro Gly Leu Pro Arg Ser Arg Asp Pro | 770 | 775 | 780 |
| Gly Glu Gly Cys Tyr Phe Asp Gly Asp Arg Ser Trp Arg Ala Ala | 785 | 790 | 795 |
| Gly Thr Arg Trp His Pro Val Val Pro Pro Phe Gly Leu Ile Lys | 800 | 805 | 810 |
| Cys Ala Val Cys Thr Cys Lys Gly Gly Thr Gly Glu Val His Cys | 815 | 820 | 825 |
| Glu Lys Val Gln Cys Pro Arg Leu Ala Cys Ala Gln Pro Val Arg | 830 | 835 | 840 |
| Val Asn Pro Thr Asp Cys Cys Lys Gln Cys Pro Val Gly Ser Gly | 845 | 850 | 855 |
| Ala His Pro Gln Leu Gly Asp Pro Met Gln Ala Asp Gly Pro Arg | 860 | 865 | 870 |
| Gly Cys Arg Phe Ala Gly Gln Trp Phe Pro Glu Ser Gln Ser Trp | 875 | 880 | 885 |
| His Pro Ser Val Pro Pro Phe Gly Glu Met Ser Cys Ile Thr Cys | 890 | 895 | 900 |
| Arg Cys Gly Ala Gly Val Pro His Cys Glu Arg Asp Asp Cys Ser | 905 | 910 | 915 |
| Leu Pro Leu Ser Cys Gly Ser Gly Lys Glu Ser Arg Cys Cys Ser | 920 | 925 | 930 |
| Arg Cys Thr Ala His Arg Arg Pro Pro Glu Thr Arg Thr Asp Pro | 935 | 940 | 945 |
| Glu Leu Glu Lys Glu Ala Glu Gly Ser                         |     |     |     |

<210> 8  
 <211> 44  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide probe  
  
 <400> 8  
 gactagttct agatcgcgag cggccgccct tttttttttt tttt 44  
  
 <210> 9  
 <211> 28  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 9  
 cggacgcgtg gggcctgcgc acccagct 28  
  
 <210> 10  
 <211> 36  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 10  
 gccgctcccc gaacgggcag cggctccttc tcagaa 36  
  
 <210> 11  
 <211> 36  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 11  
 ggcgcacagc acgcagcgca tcaccccgaa tggctc 36  
  
 <210> 12  
 <211> 26  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic Oligonucleotide Probe  
  
 <400> 12  
 gtgctgccca tccgttctga gaagga 26  
  
 <210> 13

<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 13  
gcagggtgct caaacaggac ac 22

<210> 14  
<211> 3231  
<212> DNA  
<213> Homo Sapien

<400> 14  
ggcggagcag ccctagccgc caccgtcgct ctgcagctc tcgtcgccac 50  
tgccaccgcc gccgccgtca ctgcgtcctg gctccggctc ccgcgccctc 100  
ccggccggcc atgcagcccc gccgcgccca ggcgcccggg gcgcagctgc 150  
tgcccgcgct ggccctgctg ctgctgctgc tcggagcggg gccccgaggc 200  
agctccctgg ccaaccgggt gccgcgcgcg cccttgtctg cgcgcgggcc 250  
gtgcgcgcgc cagccctgcc ggaatggggg tgtgtgcacc tcgcgcctg 300  
agccggaccc gcagcaccgc gccccgcgcg gcgagcctgg ctacagctgc 350  
acctgccccg ccgggatctc cggcgccaac tgccagcttg ttgcagatcc 400  
ttgtgccagc aacccttgtc accatggcaa ctgcagcagc agcagcagca 450  
gcagcagcga tggctacctc tgcatttgca atgaaggcta tgaagggtccc 500  
aactgtgaac aggcacttcc cagtctccca gccactgggt ggaccgaatc 550  
catggcaccg cgacagcttc agcctgttcc tgctactcag gaggctgaca 600  
aaatcctgcc tcgctctcag gcaacggtga cactgcctac ctggcagccg 650  
aaaacagggc agaaagtgtg agaaatgaaa tgggatcaag tggaggtgat 700  
cccagatatt gcctgtggga atgccagttc taacagctct gcgggtggcc 750  
gcctggatc ctttgaagtg ccacagaaca cctcagtcaa gattcggcaa 800  
gatgccactg cctcactgat tttgctctgg aaggtcacgg ccacaggatt 850  
ccaacagtgc tccctcatag atggacgaag tgtgaccccc cttcaggctt 900  
cagggggact ggtcctcctg gaggagatgc tcgccttggg gaataatcac 950  
tttattggtt ttgtgaatga ttctgtgact aagtctattg tggctttgcg 1000  
cttaactctg gtggtgaagg tcagcacctg tgtgccgggg gagagtcacg 1050

0944403-03301

caaatgactt ggagtgttca ggaaaaggaa aatgcaccac gaagccgtca 1100  
 gaggaactt tttcctgtac ctgtgaggag cagtacgtgg gtactttctg 1150  
 tgaagaatac gatgcttgcc agaggaaacc ttgccaaaac aacgcgagct 1200  
 gtattgatgc aaatgaaaag caagatggga gcaatttcac ctgtgtttgc 1250  
 cttoctgggt atactggaga gctttgccag tccaagattg attactgcat 1300  
 cctagacca tgcagaaatg gagcaacatg catttccagt ctgagtggat 1350  
 tcacctgcca gtgtccagaa ggatacttcg gatctgcttg tgaagaaaag 1400  
 gtggaccctt gcgcctcgtc tccgtgccag aacaacggca cctgctatgt 1450  
 ggacggggta cactttacct gcaactgcag cccgggcttc acagggccga 1500  
 cctgtgceca gcttattgac ttctgtgccc tcagcccttg tgctcatggc 1550  
 acgtgccgca gcgtgggcac cagctacaaa tgctctgtg atccagggtta 1600  
 ccatggcctc tactgtgagg aggaatataa tgagtgcctc tccgctccat 1650  
 gctgaatgc agccacctgc agggacctcg ttaatggcta tgagtgtgtg 1700  
 tgctggcag aatacaaagg aacacactgt gaattgtaca aggatccctg 1750  
 cgtaacgtc agctgtctga acggagccac ctgtgacagc gacggcctga 1800  
 atggcacgtg catctgtgca cccgggttta cagggtgaaga gtgcgacatt 1850  
 gacataaatg aatgtgacag taaccctcgc caccatgggtg ggagctgcct 1900  
 ggaccagccc aatgggtata actgccactg cccgcatggt tgggtgggag 1950  
 caaactgtga gatccacctc caatggaagt ccgggcacat ggcgagagac 2000  
 ctaccaaca tgccacggca ctccctctac atcatcattg gagccctctg 2050  
 cgtggccttc atccttatgc tgatcatcct gatcgtgggg atttgccgca 2100  
 tcagccgcat tgaataccag ggttcttcca ggccagccta tgaggagttc 2150  
 tacaactgcc gcagcatcga cagcgagtgc agcaatgcc ttgcatccat 2200  
 ccggcatgcc aggtttggaa agaaatcccg gcctgcaatg tatgatgtga 2250  
 gccccatgc ctatgaagat tacagtccctg atgacaaacc cttggtcaca 2300  
 ctgattaaaa ctaaagattt gtaatctttt tttggattat ttttcaaaaa 2350  
 gatgagatac tacactcatt taaatatttt taagaaaata aaaagcttaa 2400  
 gaaatttaaa atgctagctg ctcaagagtt ttcagtagaa tatttaagaa 2450  
 ctaattttct gcagctttta gtttggaaaa aatattttta aaacaaaatt 2500

tgtgaaacct atagacgatg ttttaatgta ccttcagctc tctaaactgt 2550  
 gtgcttctac tagtgtgtgc tcttttctact gtagacacta tcacgagacc 2600  
 cagattaatt tctgtggttg ttacagaata agtctaataca aggagaagtt 2650  
 tctgtttgac gtttgagtgc cggttttctg agtagagtta ggaaaaccac 2700  
 gtaacgtagc atatgatgta taatagagta taccggttac ttaaaaagaa 2750  
 gtctgaaatg ttcgttttgt ggaaaagaaa ctagttaaat ttactattcc 2800  
 taaccggaat gaaattagcc tttgccttat tctgtgcatg ggtaagtaac 2850  
 ttattttctgc actgttttgt tgaactttgt ggaaacattc tttcgagttt 2900  
 gtttttgtca ttttcgtaac agtcgtcgaa ctaggcctca aaaacatacg 2950  
 taacgaaaag gcctagcgag gcaaattctg attgatttga atctatattt 3000  
 ttcttttaaaa agtcaagggt tctatattgt gagtaaatta aatttacatt 3050  
 tgagttgttt gttgctaaga ggtagtaaat gtaagagagt actggttcct 3100  
 tcagtagtga gtattttctca tagtgcagct ttatttatct ccaggatgtt 3150  
 tttgtggctg tatttgattg atatgtgctt cttctgattc ttgctaattt 3200  
 ccaaccatat tgaataaatg tgatcaagtc a 3231

<210> 15  
 <211> 737  
 <212> PRT  
 <213> Homo Sapien

<400> 15  
 Met Gln Pro Arg Arg Ala Gln Ala Pro Gly Ala Gln Leu Leu Pro  
 1 5 10 15  
 Ala Leu Ala Leu Leu Leu Leu Leu Leu Gly Ala Gly Pro Arg Gly  
 20 25 30  
 Ser Ser Leu Ala Asn Pro Val Pro Ala Ala Pro Leu Ser Ala Pro  
 35 40 45  
 Gly Pro Cys Ala Ala Gln Pro Cys Arg Asn Gly Gly Val Cys Thr  
 50 55 60  
 Ser Arg Pro Glu Pro Asp Pro Gln His Pro Ala Pro Ala Gly Glu  
 65 70 75  
 Pro Gly Tyr Ser Cys Thr Cys Pro Ala Gly Ile Ser Gly Ala Asn  
 80 85 90  
 Cys Gln Leu Val Ala Asp Pro Cys Ala Ser Asn Pro Cys His His  
 95 100 105  
 Gly Asn Cys Ser Ser Ser Ser Ser Ser Ser Ser Asp Gly Tyr Leu



004440-03001

|                                     |                         |     |
|-------------------------------------|-------------------------|-----|
| 110                                 | 115                     | 120 |
| Cys Ile Cys Asn Glu Gly Tyr Glu Gly | Pro Asn Cys Glu Gln Ala |     |
| 125                                 | 130                     | 135 |
| Leu Pro Ser Leu Pro Ala Thr Gly Trp | Thr Glu Ser Met Ala Pro |     |
| 140                                 | 145                     | 150 |
| Arg Gln Leu Gln Pro Val Pro Ala Thr | Gln Glu Pro Asp Lys Ile |     |
| 155                                 | 160                     | 165 |
| Leu Pro Arg Ser Gln Ala Thr Val Thr | Leu Pro Thr Trp Gln Pro |     |
| 170                                 | 175                     | 180 |
| Lys Thr Gly Gln Lys Val Val Glu Met | Lys Trp Asp Gln Val Glu |     |
| 185                                 | 190                     | 195 |
| Val Ile Pro Asp Ile Ala Cys Gly Asn | Ala Ser Ser Asn Ser Ser |     |
| 200                                 | 205                     | 210 |
| Ala Gly Gly Arg Leu Val Ser Phe Glu | Val Pro Gln Asn Thr Ser |     |
| 215                                 | 220                     | 225 |
| Val Lys Ile Arg Gln Asp Ala Thr Ala | Ser Leu Ile Leu Leu Trp |     |
| 230                                 | 235                     | 240 |
| Lys Val Thr Ala Thr Gly Phe Gln Gln | Cys Ser Leu Ile Asp Gly |     |
| 245                                 | 250                     | 255 |
| Arg Ser Val Thr Pro Leu Gln Ala Ser | Gly Gly Leu Val Leu Leu |     |
| 260                                 | 265                     | 270 |
| Glu Glu Met Leu Ala Leu Gly Asn Asn | His Phe Ile Gly Phe Val |     |
| 275                                 | 280                     | 285 |
| Asn Asp Ser Val Thr Lys Ser Ile Val | Ala Leu Arg Leu Thr Leu |     |
| 290                                 | 295                     | 300 |
| Val Val Lys Val Ser Thr Cys Val Pro | Gly Glu Ser His Ala Asn |     |
| 305                                 | 310                     | 315 |
| Asp Leu Glu Cys Ser Gly Lys Gly Lys | Cys Thr Thr Lys Pro Ser |     |
| 320                                 | 325                     | 330 |
| Glu Ala Thr Phe Ser Cys Thr Cys Glu | Glu Gln Tyr Val Gly Thr |     |
| 335                                 | 340                     | 345 |
| Phe Cys Glu Glu Tyr Asp Ala Cys Gln | Arg Lys Pro Cys Gln Asn |     |
| 350                                 | 355                     | 360 |
| Asn Ala Ser Cys Ile Asp Ala Asn Glu | Lys Gln Asp Gly Ser Asn |     |
| 365                                 | 370                     | 375 |
| Phe Thr Cys Val Cys Leu Pro Gly Tyr | Thr Gly Glu Leu Cys Gln |     |
| 380                                 | 385                     | 390 |
| Ser Lys Ile Asp Tyr Cys Ile Leu Asp | Pro Cys Arg Asn Gly Ala |     |
| 395                                 | 400                     | 405 |

09944403-083004  
FOOEBO "EOTHTH550

|                 |                     |                     |     |
|-----------------|---------------------|---------------------|-----|
| Thr Cys Ile Ser | Ser Leu Ser Gly Phe | Thr Cys Gln Cys Pro | Glu |
| 410             | 415                 |                     | 420 |
| Gly Tyr Phe Gly | Ser Ala Cys Glu Glu | Lys Val Asp Pro Cys | Ala |
| 425             | 430                 |                     | 435 |
| Ser Ser Pro Cys | Gln Asn Asn Gly Thr | Cys Tyr Val Asp Gly | Val |
| 440             | 445                 |                     | 450 |
| His Phe Thr Cys | Asn Cys Ser Pro Gly | Phe Thr Gly Pro Thr | Cys |
| 455             | 460                 |                     | 465 |
| Ala Gln Leu Ile | Asp Phe Cys Ala Leu | Ser Pro Cys Ala His | Gly |
| 470             | 475                 |                     | 480 |
| Thr Cys Arg Ser | Val Gly Thr Ser Tyr | Lys Cys Leu Cys Asp | Pro |
| 485             | 490                 |                     | 495 |
| Gly Tyr His Gly | Leu Tyr Cys Glu Glu | Glu Tyr Asn Glu Cys | Leu |
| 500             | 505                 |                     | 510 |
| Ser Ala Pro Cys | Leu Asn Ala Ala Thr | Cys Arg Asp Leu Val | Asn |
| 515             | 520                 |                     | 525 |
| Gly Tyr Glu Cys | Val Cys Leu Ala Glu | Tyr Lys Gly Thr His | Cys |
| 530             | 535                 |                     | 540 |
| Glu Leu Tyr Lys | Asp Pro Cys Ala Asn | Val Ser Cys Leu Asn | Gly |
| 545             | 550                 |                     | 555 |
| Ala Thr Cys Asp | Ser Asp Gly Leu Asn | Gly Thr Cys Ile Cys | Ala |
| 560             | 565                 |                     | 570 |
| Pro Gly Phe Thr | Gly Glu Glu Cys Asp | Ile Asp Ile Asn Glu | Cys |
| 575             | 580                 |                     | 585 |
| Asp Ser Asn Pro | Cys His His Gly Gly | Ser Cys Leu Asp Gln | Pro |
| 590             | 595                 |                     | 600 |
| Asn Gly Tyr Asn | Cys His Cys Pro His | Gly Trp Val Gly Ala | Asn |
| 605             | 610                 |                     | 615 |
| Cys Glu Ile His | Leu Gln Trp Lys Ser | Gly His Met Ala Glu | Ser |
| 620             | 625                 |                     | 630 |
| Leu Thr Asn Met | Pro Arg His Ser Leu | Tyr Ile Ile Ile Gly | Ala |
| 635             | 640                 |                     | 645 |
| Leu Cys Val Ala | Phe Ile Leu Met Leu | Ile Ile Leu Ile Val | Gly |
| 650             | 655                 |                     | 660 |
| Ile Cys Arg Ile | Ser Arg Ile Glu Tyr | Gln Gly Ser Ser Arg | Pro |
| 665             | 670                 |                     | 675 |
| Ala Tyr Glu Glu | Phe Tyr Asn Cys Arg | Ser Ile Asp Ser Glu | Phe |
| 680             | 685                 |                     | 690 |
| Ser Asn Ala Ile | Ala Ser Ile Arg His | Ala Arg Phe Gly Lys | Lys |

695

700

705

Ser Arg Pro Ala Met Tyr Asp Val Ser Pro Ile Ala Tyr Glu Asp  
710 715 720

Tyr Ser Pro Asp Asp Lys Pro Leu Val Thr Leu Ile Lys Thr Lys  
725 730 735

Asp Leu

<210> 16

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 16

tgtaaaacga cggccagtta aatagacctg caattattaa tct 43

<210> 17

<211> 41

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 17

caggaaacag ctatgaccac ctgcacacct gcaaattccat t 41

<210> 18

<211> 508

<212> DNA

<213> Homo Sapien

<400> 18

ctctggaagg tcacggccac aggattccaa cagtgtctcc tcatagatgg 50

acgaaagtgt gacccccctt tcaggctttc aggggggactg gtcctcctgg 100

aggagatgct cgccttgagg aataatcact ttattgggtt tgtgaatgat 150

tctgtgacta agtctattgt ggctttgcgc ttaactctgg tggagaagg 200

cagcacctgt gtgccggggg agagtcacgc aaatgacttg gagggttcag 250

gaaaaggaaa atgcaccacg aagccgtcag aggcaacttt ttcctgtacc 300

tgtgaggagc agtacgtggg tactttctgt gaagaatacg atgcttgcca 350

gaggaaacct tgccaaaaca acgcgagctg tattgatgca aatgaaaagc 400

aagatgggag caatttcacc tgtgtttgcc ttcctgggta tactggagag 450

ctttgccaac cgaactgaga ttggagcgaa cgacctacac cgaactgaga 500

00944403-083001

taggggag 508

<210> 19  
<211> 508  
<212> DNA  
<213> Homo Sapien

<400> 19  
ctctggaagg tcacggccac aggattccaa cagtgctccc tcatagatgg 50  
acgaaagtgt gacccccctt tcaggctttc aggggggactg gtcctcctgg 100  
aggagatgct cgccttgagg aataatcact ttattggttt tgtgaatgat 150  
tctgtgacta agtctattgt ggctttgcgc ttaactctgg tggagaaggt 200  
cagcacctgt gtgccggggg agagtcacgc aaatgacttg gagtgttcag 250  
gaaaaggaaa atgcaccacg aagccgtcag aggcaacttt ttcctgtacc 300  
tgtgaggagc agtacgtggg tactttctgt gaagaatacg atgcttgcca 350  
gaggaaacct tgccaaaaca acgcgagctg tattgatgca aatgaaaagc 400  
aagatgggag caatttcacc tgtgtttgcc ttcctgggta tactggagag 450  
ctttgccaac cgaactgaga ttggagcgaa cgacctacac cgaactgaga 500  
taggggag 508

<210> 20  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic Oligonucleotide Probe

<400> 20  
ctctggaagg tcacggccac agg 23

<210> 21  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 21  
ctcagttcgg ttggcaaagc tctc 24

<210> 22  
<211> 69  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 22

cagtgtctccc tcatagatgg acgaaagtgt gacccccctt tcaggcgaga 50

gctttgccaa ccgaactga 69

<210> 23

<211> 1520

<212> DNA

<213> Homo Sapien

<400> 23

gctgagtctg ctgtctctgc tgtgtgtgt ccagcctgta acctgtgect 50

acaccacgcc agggcccccc agagccctca ccacgctggg cgccccaga 100

gcccacacca tgccgggcac ctacgtctcc tcgaccacac tcagtagtcc 150

cagcaccag ggctgcaag agcaggcacg ggccctgatg cgggacttcc 200

cgctcgtgga cggccacaac gacctgcccc tggctctaag gcaggtttac 250

cagaaagggc tacaggatgt taacctgcgc aatttcagct acggccagac 300

cagcctggac aggcttagag atggcctcgt gggcgcccag ttctggtcag 350

cctatgtgcc atgccagacc caggaccggg atgcctgcg cctcaccctg 400

gagcagattg acctcatacg ccgcatgtgt gcctcctatt ctgagctgga 450

gcttgtgacc tcggctaaag ctctgaacga cactcagaaa ttggcctgcc 500

tcacgggtgt agaggggtggc cactcgctgg acaatagcct ctccatctta 550

cgtaccttct acatgctggg agtgcgctac ctgacgtca cccacacctg 600

caacacaccc tgggcagaga gctccgctaa gggcgccac tccttctaca 650

acaacatcag cgggctgact gactttgggt agaagggtggg ggcagaaatg 700

aaccgcctgg gcatgatggg agacttatcc catgtctcag atgctgtggc 750

acggcgggcc ctggaagtgt cacaggcacc tgtgatcttc tcccactcgg 800

ctgcccgggg tgtgtgcaac agtgctcgga atgttctga tgacatcctg 850

cagcttctga agaagaacgg tggcgtcgtg atgggtgtctt tgtccatggg 900

agtaatacag tgcaacccat cagccaatgt gtccactgtg gcagatcact 950

tcgaccacat caaggctgtc attggatcca agttcatcgg gattgggtgga 1000

gattatgatg gggccggcaa attccctcag gggctggaag acgtgtccac 1050

ataccgggtc ctgatagagg agttgctgag tcgtggctgg agtgaggaag 1100

agcttcaggg tgccttcgt ggaaacctgc tgcgggtctt cagacaagtg 1150

0944403-083001

**SECRET**

<211> 433

<213> Homo Sapien

Met Pro Gly Thr Tyr Ala Pro Ser Thr Thr Leu Ser Ser Pro Ser  
1 5 10 15

Thr Gln Gly Leu Gln Glu Gln Ala Arg Ala Leu Met Arg Asp Phe  
20 25 30

Pro Leu Val Asp Gly His Asn Asp Leu Pro Leu Val Leu Arg Gln  
35 40 45

Val Tyr Gln Lys Gly Leu Gln Asp Val Asn Leu Arg Asn Phe Ser  
50 55 60

Tyr Gly Gln Thr Ser Leu Asp Arg Leu Arg Asp Gly Leu Val Gly  
65 70 75

Ala Gln Phe Trp Ser Ala Tyr Val Pro Cys Gln Thr Gln Asp Arg  
80 85 90

Asp Ala Leu Arg Leu Thr Leu Glu Gln Ile Asp Leu Ile Arg Arg  
95 100 105

Met Cys Ala Ser Tyr Ser Glu Leu Glu Leu Val Thr Ser Ala Lys  
110 115 120

Ala Leu Asn Asp Thr Gln Lys Leu Ala Cys Leu Ile Gly Val Glu  
125 130 135

Gly Gly His Ser Leu Asp Asn Ser Leu Ser Ile Leu Arg Thr Phe  
140 145 150

Tyr Met Leu Gly Val Arg Tyr Leu Thr Leu Thr His Thr Cys Asn  
155 160 165

Thr Pro Trp Ala Glu Ser Ser Ala Lys Gly Val His Ser Phe Tyr  
170 175 180



<400> 25  
agttctgggc agcctatgtg cc 22

<210> 26  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 26  
cgtgatgggtg tctttgtcca tggg 24

<210> 27  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 27  
ctccaccaat cccgatgaac ttgg 24

<210> 28  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 28  
gagcagattg acctcatagc ccgcattgtg gcctcctatt ctgagctgga 50

<210> 29  
<211> 1416  
<212> DNA  
<213> Homo Sapien

<400> 29  
aaaacctata aatattccgg attattcata ccgtcccacc atcgggcgcg 50  
gatccgcggc cgccaattct aaaccaacat gccgggcacc tacgctccct 100  
cgaccacact cagtagtccc agcaccagg gcctgcaaga gcaggcacgg 150  
gccctgatgc gggacttccc gctcgtggac ggccacaacg acctgcccct 200  
ggtcctaagg caggtttacc agaaagggt acaggatgtt aacctgcgca 250  
atttcagcta cggccagacc agcctggaca ggcttagaga tggcctcgtg 300  
ggcgccaggt tctggtcagc ctatgtgcca tgccagaccc aggaccggga 350  
tgccctgcgc ctcaccctgg agcagattga cctcatagc cgcattgtgtg 400



09944403-083001

cctcctattc tgagctggag cttgtgacct cggctaaagc tctgaacgac 450  
 actcagaaat tggcctgcct catcggtgta gaggggtggcc actcgctgga 500  
 caatagcctc tccatcttac gtaccttcta catgctggga gtgcgctacc 550  
 tgacgctcac ccacacctgc aacacacctt gggcagagag ctccgctaag 600  
 ggcgtccact ccttctacaa caacatcagc gggctgactg acttttgtga 650  
 gaaggtggtg gcagaaatga accgcctggg catgatggta gacttatccc 700  
 atgtctcaga tgctgtggca cggcgggccc tggaagtgtc acaggcacct 750  
 gtgatcttct cccactcggc tgcccggggg gtgtgcaaca gtgctcggaa 800  
 tgttctgat gacatcctgc agcttctgaa gaagaacggg ggcgtcgtga 850  
 tgggtgtcttt gtccatggga gtaatacagt gcaacccatc agccaatgtg 900  
 tccactgtgg cagatcactt cgaccacatc aaggctgtca ttggatcaa 950  
 gttcatcggg attggtggag attatgatgg ggccggcaaa ttcctcagg 1000  
 ggctggaaga cgtgtccaca tacccggtcc tgatagagga gttgctgagt 1050  
 cgtggctgga gtgaggaaga gcttcagggt gtccttcgtg gaaacctgct 1100  
 gcgggtcttc agacaagtgg aaaaggtaca ggaagaaaac aaatggcaaa 1150  
 gcccccttga ggacaagttc ccggatgagc agctgagcag ttcctgccac 1200  
 tccgacctct cactctgcg tcagagacag agtctgactt caggccagga 1250  
 actcactgag attcccatc actggacagc caagttacca gccaaagtgg 1300  
 cagtctcaga gtccctcccc caccctgaca aaactcacac atgcccaccg 1350  
 tgcccagcac ctgaactcct ggggggaccg tcagtcttcc tcttcccccc 1400  
 aaaacccaag gacacc 1416

<210> 30  
 <211> 446  
 <212> PRT  
 <213> Homo Sapien

<400> 30  
 Met Pro Gly Thr Tyr Ala Pro Ser Thr Thr Leu Ser Ser Pro Ser  
 1 5 10 15  
 Thr Gln Gly Leu Gln Glu Gln Ala Arg Ala Leu Met Arg Asp Phe  
 20 25 30  
 Pro Leu Val Asp Gly His Asn Asp Leu Pro Leu Val Leu Arg Gln  
 35 40 45  
 Val Tyr Gln Lys Gly Leu Gln Asp Val Asn Leu Arg Asn Phe Ser

|     |     |     |     |            |     |     |     |     |            |     |     |     |     |            |
|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|
|     |     |     |     | 50         |     |     |     |     | 55         |     |     |     |     | 60         |
| Tyr | Gly | Gln | Thr | Ser<br>65  | Leu | Asp | Arg | Leu | Arg<br>70  | Asp | Gly | Leu | Val | Gly<br>75  |
| Ala | Gln | Phe | Trp | Ser<br>80  | Ala | Tyr | Val | Pro | Cys<br>85  | Gln | Thr | Gln | Asp | Arg<br>90  |
| Asp | Ala | Leu | Arg | Leu<br>95  | Thr | Leu | Glu | Gln | Ile<br>100 | Asp | Leu | Ile | Arg | Arg<br>105 |
| Met | Cys | Ala | Ser | Tyr<br>110 | Ser | Glu | Leu | Glu | Leu<br>115 | Val | Thr | Ser | Ala | Lys<br>120 |
| Ala | Leu | Asn | Asp | Thr<br>125 | Gln | Lys | Leu | Ala | Cys<br>130 | Leu | Ile | Gly | Val | Glu<br>135 |
| Gly | Gly | His | Ser | Leu<br>140 | Asp | Asn | Ser | Leu | Ser<br>145 | Ile | Leu | Arg | Thr | Phe<br>150 |
| Tyr | Met | Leu | Gly | Val<br>155 | Arg | Tyr | Leu | Thr | Leu<br>160 | Thr | His | Thr | Cys | Asn<br>165 |
| Thr | Pro | Trp | Ala | Glu<br>170 | Ser | Ser | Ala | Lys | Gly<br>175 | Val | His | Ser | Phe | Tyr<br>180 |
| Asn | Asn | Ile | Ser | Gly<br>185 | Leu | Thr | Asp | Phe | Gly<br>190 | Glu | Lys | Val | Val | Ala<br>195 |
| Glu | Met | Asn | Arg | Leu<br>200 | Gly | Met | Met | Val | Asp<br>205 | Leu | Ser | His | Val | Ser<br>210 |
| Asp | Ala | Val | Ala | Arg<br>215 | Arg | Ala | Leu | Glu | Val<br>220 | Ser | Gln | Ala | Pro | Val<br>225 |
| Ile | Phe | Ser | His | Ser<br>230 | Ala | Ala | Arg | Gly | Val<br>235 | Cys | Asn | Ser | Ala | Arg<br>240 |
| Asn | Val | Pro | Asp | Asp<br>245 | Ile | Leu | Gln | Leu | Leu<br>250 | Lys | Lys | Asn | Gly | Gly<br>255 |
| Val | Val | Met | Val | Ser<br>260 | Leu | Ser | Met | Gly | Val<br>265 | Ile | Gln | Cys | Asn | Pro<br>270 |
| Ser | Ala | Asn | Val | Ser<br>275 | Thr | Val | Ala | Asp | His<br>280 | Phe | Asp | His | Ile | Lys<br>285 |
| Ala | Val | Ile | Gly | Ser<br>290 | Lys | Phe | Ile | Gly | Ile<br>295 | Gly | Gly | Asp | Tyr | Asp<br>300 |
| Gly | Ala | Gly | Lys | Phe<br>305 | Pro | Gln | Gly | Leu | Glu<br>310 | Asp | Val | Ser | Thr | Tyr<br>315 |
| Pro | Val | Leu | Ile | Glu<br>320 | Glu | Leu | Leu | Ser | Arg<br>325 | Gly | Trp | Ser | Glu | Glu<br>330 |
| Glu | Leu | Gln | Gly | Val<br>335 | Leu | Arg | Gly | Asn | Leu<br>340 | Leu | Arg | Val | Phe | Arg<br>345 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Val | Glu | Lys | Val | Gln | Glu | Glu | Asn | Lys | Trp | Gln | Ser | Pro | Leu |
|     |     |     |     | 350 |     |     |     |     | 355 |     |     |     |     | 360 |
| Glu | Asp | Lys | Phe | Pro | Asp | Glu | Gln | Leu | Ser | Ser | Ser | Cys | His | Ser |
|     |     |     |     | 365 |     |     |     |     | 370 |     |     |     |     | 375 |
| Asp | Leu | Ser | Arg | Leu | Arg | Gln | Arg | Gln | Ser | Leu | Thr | Ser | Gly | Gln |
|     |     |     |     | 380 |     |     |     |     | 385 |     |     |     |     | 390 |
| Glu | Leu | Thr | Glu | Ile | Pro | Ile | His | Trp | Thr | Ala | Lys | Leu | Pro | Ala |
|     |     |     |     | 395 |     |     |     |     | 400 |     |     |     |     | 405 |
| Lys | Trp | Ser | Val | Ser | Glu | Ser | Ser | Pro | His | Pro | Asp | Lys | Thr | His |
|     |     |     |     | 410 |     |     |     |     | 415 |     |     |     |     | 420 |
| Thr | Cys | Pro | Pro | Cys | Pro | Ala | Pro | Glu | Leu | Leu | Gly | Gly | Pro | Ser |
|     |     |     |     | 425 |     |     |     |     | 430 |     |     |     |     | 435 |
| Val | Phe | Leu | Phe | Pro | Pro | Lys | Pro | Lys | Asp | Thr |     |     |     |     |
|     |     |     |     | 440 |     |     |     |     | 445 |     |     |     |     |     |

<210> 31  
 <211> 1790  
 <212> DNA  
 <213> Homo Sapien

<400> 31  
 cgcccagcga cgtgcgggcg gcttgccccg cgccctcccg cgcccgccct 50  
 gcgtcccgcg ccttgcgcca ccgccgccga gccgcagccc gccgcgcgcc 100  
 cccggcagcg ccggccccat gcccgccggc cgccggggcc ccgccgcca 150  
 atccgcgcgg cggccgccgc cgttgctgcc cctgctgctg ctgctctgcg 200  
 tcctcggggc gccgcgagcc ggatcaggag ccacacagc tgtgatcagt 250  
 ccccaggatc ccacgcttct catcggtcc tccctgctgg ccacctgctc 300  
 agtgcacgga gaccaccag gagccaccgc cgagggcctc tactggaccc 350  
 tcaacgggcg ccgcctgccc cctgagctct cccgtgtact caacgcctcc 400  
 accttggtc tggccctggc caacctcaat ggggtccaggc agcggtcggg 450  
 ggacaacctc gtgtgccacg cccgtgacgg cagcatcctg gctggctcct 500  
 gcctctatgt tggcctgccc ccagagaaac ccgtcaacat cagctgctgg 550  
 tccaagaaca tgaaggactt gacctgccgc tggacgccag gggccacgg 600  
 ggagaccttc ctccacacca actactcct caagtacaag cttaggtgg 650  
 atggccagga caacacatgt gaggagtacc acacagtggg gcccactcc 700  
 tgccacatcc ccaaggacct ggctctcttt acgccctatg agatctgggt 750  
 ggaggccacc aaccgcctgg gctctgcccc ctccgatgta ctcacgctgg 800

09944403-033001

atatactgga tgtggtgacc acggaccccc cgcccacgt gcacgtgagc 850  
 cgcgtcgggg gcctggagga ccagctgagc gtgcgctggg tgtcgccacc 900  
 cgcctcaag gatttctct ttcaagccaa ataccagatc cgctaccgag 950  
 tggaggacag tgtggactgg aagggtggtgg acgatgtgag caaccagacc 1000  
 tcctgcccgc tggccggcct gaaacccggc accgtgtact tcgtgcaagt 1050  
 gcgctgcaac ccccttgga tctatggctc caagaaagcc gggatctgga 1100  
 gtgagtggag ccacccaca gccgcctcca ctccccgag tgagcgcccg 1150  
 ggcccgggcg gcggggcggtg cgaaccgcgg ggcggagagc cgagctcggg 1200  
 gccggtgcgg cgcgagctca agcagttcct gggctggctc aagaagcacg 1250  
 cgtactgtc caacctcagc ttccgcctct acgaccagtg gcgagcctgg 1300  
 atgcagaagt cgcacaagac ccgcaaccag gacgagggga tcctgccctc 1350  
 gggcagacgg ggcacggcga gaggtcctgc cagataagct gtaggggctc 1400  
 aggccaccct ccctgccacg tggagacgca gaggccgaac ccaaactggg 1450  
 gccacctctg taccctcact tcagggcacc tgagccaccc tcagcaggag 1500  
 ctgggggtggc ccctgagctc caacggccat aacagctctg actcccacgt 1550  
 gaggccacct ttgggtgcac cccagtgggt gtgtgtgtgt gtgtgaggg 1600  
 tggttgagtt gcctagaacc cctgccaggg ctgggggtga gaaggggagt 1650  
 cattactccc cattacctag ggcccccca aaagagtcct tttaaataaa 1700  
 tgagctattt aggtgctgtg attgtgaaaa aaaaaaaaaa aaaaaaaaaa 1750  
 aaaaaaaaaa aaaaaaaaaa aaaaacaaaa aaaaaaaaaa 1790

<210> 32  
 <211> 422  
 <212> PRT  
 <213> Homo Sapien

<400> 32  
 Met Pro Ala Gly Arg Arg Gly Pro Ala Ala Gln Ser Ala Arg Arg  
 1 5 10 15  
 Pro Pro Pro Leu Leu Pro Leu Leu Leu Leu Leu Cys Val Leu Gly  
 20 25 30  
 Ala Pro Arg Ala Gly Ser Gly Ala His Thr Ala Val Ile Ser Pro  
 35 40 45  
 Gln Asp Pro Thr Leu Leu Ile Gly Ser Ser Leu Leu Ala Thr Cys  
 50 55 60

00944403-083001

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Val | His | Gly | Asp | Pro | Pro | Gly | Ala | Thr | Ala | Glu | Gly | Leu | Tyr | 65  | 70  | 75  |
| Trp | Thr | Leu | Asn | Gly | Arg | Arg | Leu | Pro | Pro | Glu | Leu | Ser | Arg | Val | 80  | 85  | 90  |
| Leu | Asn | Ala | Ser | Thr | Leu | Ala | Leu | Ala | Leu | Ala | Asn | Leu | Asn | Gly | 95  | 100 | 105 |
| Ser | Arg | Gln | Arg | Ser | Gly | Asp | Asn | Leu | Val | Cys | His | Ala | Arg | Asp | 110 | 115 | 120 |
| Gly | Ser | Ile | Leu | Ala | Gly | Ser | Cys | Leu | Tyr | Val | Gly | Leu | Pro | Pro | 125 | 130 | 135 |
| Glu | Lys | Pro | Val | Asn | Ile | Ser | Cys | Trp | Ser | Lys | Asn | Met | Lys | Asp | 140 | 145 | 150 |
| Leu | Thr | Cys | Arg | Trp | Thr | Pro | Gly | Ala | His | Gly | Glu | Thr | Phe | Leu | 155 | 160 | 165 |
| His | Thr | Asn | Tyr | Ser | Leu | Lys | Tyr | Lys | Leu | Arg | Trp | Tyr | Gly | Gln | 170 | 175 | 180 |
| Asp | Asn | Thr | Cys | Glu | Glu | Tyr | His | Thr | Val | Gly | Pro | His | Ser | Cys | 185 | 190 | 195 |
| His | Ile | Pro | Lys | Asp | Leu | Ala | Leu | Phe | Thr | Pro | Tyr | Glu | Ile | Trp | 200 | 205 | 210 |
| Val | Glu | Ala | Thr | Asn | Arg | Leu | Gly | Ser | Ala | Arg | Ser | Asp | Val | Leu | 215 | 220 | 225 |
| Thr | Leu | Asp | Ile | Leu | Asp | Val | Val | Thr | Thr | Asp | Pro | Pro | Pro | Asp | 230 | 235 | 240 |
| Val | His | Val | Ser | Arg | Val | Gly | Gly | Leu | Glu | Asp | Gln | Leu | Ser | Val | 245 | 250 | 255 |
| Arg | Trp | Val | Ser | Pro | Pro | Ala | Leu | Lys | Asp | Phe | Leu | Phe | Gln | Ala | 260 | 265 | 270 |
| Lys | Tyr | Gln | Ile | Arg | Tyr | Arg | Val | Glu | Asp | Ser | Val | Asp | Trp | Lys | 275 | 280 | 285 |
| Val | Val | Asp | Asp | Val | Ser | Asn | Gln | Thr | Ser | Cys | Arg | Leu | Ala | Gly | 290 | 295 | 300 |
| Leu | Lys | Pro | Gly | Thr | Val | Tyr | Phe | Val | Gln | Val | Arg | Cys | Asn | Pro | 305 | 310 | 315 |
| Phe | Gly | Ile | Tyr | Gly | Ser | Lys | Lys | Ala | Gly | Ile | Trp | Ser | Glu | Trp | 320 | 325 | 330 |
| Ser | His | Pro | Thr | Ala | Ala | Ser | Thr | Pro | Arg | Ser | Glu | Arg | Pro | Gly | 335 | 340 | 345 |
| Pro | Gly | Gly | Gly | Ala | Cys | Glu | Pro | Arg | Gly | Gly | Glu | Pro | Ser | Ser |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|     | 350 |     | 355 |     | 360 |     |     |     |     |     |     |     |     |     |
| Gly | Pro | Val | Arg | Arg | Glu | Leu | Lys | Gln | Phe | Leu | Gly | Trp | Leu | Lys |
|     |     |     |     | 365 |     |     |     |     | 370 |     |     |     |     | 375 |
| Lys | His | Ala | Tyr | Cys | Ser | Asn | Leu | Ser | Phe | Arg | Leu | Tyr | Asp | Gln |
|     |     |     |     | 380 |     |     |     |     | 385 |     |     |     |     | 390 |
| Trp | Arg | Ala | Trp | Met | Gln | Lys | Ser | His | Lys | Thr | Arg | Asn | Gln | Asp |
|     |     |     |     | 395 |     |     |     |     | 400 |     |     |     |     | 405 |
| Glu | Gly | Ile | Leu | Pro | Ser | Gly | Arg | Arg | Gly | Thr | Ala | Arg | Gly | Pro |
|     |     |     |     | 410 |     |     |     |     | 415 |     |     |     |     | 420 |

Ala Arg

<210> 33  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 33  
 cccgcccgcac gtgcacgtga gcc 23

<210> 34  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 34  
 tgagccagcc caggaactgc ttg 23

<210> 35  
 <211> 50  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 35  
 caagtgcgct gcaaccctt tggcatctat ggctccaaga aagccgggat 50

<210> 36  
 <211> 1771  
 <212> DNA  
 <213> Homo Sapien

<400> 36  
 cccacgcgtc cgctgggtgtt agatcgagca accctctaaa agcagtttag 50

agtggtaaaa aaaaaaaaaa acacacccaaa cgctcgcagc cacaaaagg 100  
 atgaaatttc ttctggacat cctcctgctt ctcccgttac tgategtctg 150  
 ctccctagag tccttcgtga agctttttat tccctaagagg agaaaatcag 200  
 tcaccggcga aatcgtgctg attacaggag ctgggcatgg aattgggaga 250  
 ctgactgect atgaatttgc taaactttaa agcaagctgg ttctctggga 300  
 tataaataag catggactgg aggaaacagc tgccaaatgc aagggactgg 350  
 gtgccaaggt tcataccttt gtggtagact gcagcaaccg agaagatatt 400  
 tacagctctg caaagaaggt gaaggcagaa attggagatg ttagtatttt 450  
 agtaaataat gctggtgtag tctatacatc agatttggtt gctacacaag 500  
 atcctcagat tgaaaagact tttgaagtta atgtacttgc acatttctgg 550  
 actacaaagg catttcttcc tgcaatgacg aagaataacc atggccatat 600  
 tgtcactgtg gcttcggcag ctggacatgt ctcggtcccc ttcttactgg 650  
 cttactgttc aagcaagttt gctgctgttg gatttcataa aactttgaca 700  
 gatgaactgg ctgccttaca aataactgga gtcaaaacaa catgtctgtg 750  
 tccataatttc gtaaacactg gcttcatcaa aaatccaagt acaagtttgg 800  
 gaccactctt ggaacctgag gaagtggtaa acaggctgat gcatgggatt 850  
 ctgactgagc agaagatgat ttttattcca tcttctatag cttttttaac 900  
 aacattggaa aggatccttc ctgagcggtt cctggcagtt ttaaaacgaa 950  
 aaatcagtgt taagtttgat gcagttattg gatataaaat gaaagcgcaa 1000  
 taagcaccta gttttctgaa aactgattta ccaggtttag gttgatgtca 1050  
 tctaatagtg ccagaatttt aatgtttgaa cttctgtttt ttctaattat 1100  
 cccattttct tcaatatcat ttttgaggct ttggcagtct tcatttacta 1150  
 ccacttggtc tttagccaaa agctgattac atatgatata aacagagaaa 1200  
 tacctttaga ggtgacttta aggaaaatga agaaaaagaa ccaaaatgac 1250  
 tttattaaaa taatttccaa gattatttgt ggctcacctg aaggctttgc 1300  
 aaaatttgta ccataaccgt ttatttaaca tatattttta tttttgattg 1350  
 cacttaaatt ttgtataatt tgtgtttctt tttctgttct acataaaatc 1400  
 agaaacttca agctctctaa ataaaatgaa ggactatatc tagtggtatt 1450  
 tcacaatgaa tatcatgaac tctcaatggg taggtttcat cctaccatt 1500

gccactctgt ttcctgagag atacctcaca ttccaatgcc aaacatttct 1550  
gcacagggaa gctagagggtg gatacacgtg ttgcaagtat aaaagcatca 1600  
ctgggattta aggagaattg agagaatgta cccacaaatg gcagcaataa 1650  
taaatggatc acacttaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1700  
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1750  
aaaaaaaaaa aaaaaaaaaa a 1771

<210> 37  
<211> 300  
<212> PRT  
<213> Homo Sapien

<400> 37  
Met Lys Phe Leu Leu Asp Ile Leu Leu Leu Leu Pro Leu Leu Ile  
1 5 10 15  
Val Cys Ser Leu Glu Ser Phe Val Lys Leu Phe Ile Pro Lys Arg  
20 25 30  
Arg Lys Ser Val Thr Gly Glu Ile Val Leu Ile Thr Gly Ala Gly  
35 40 45  
His Gly Ile Gly Arg Leu Thr Ala Tyr Glu Phe Ala Lys Leu Lys  
50 55 60  
Ser Lys Leu Val Leu Trp Asp Ile Asn Lys His Gly Leu Glu Glu  
65 70 75  
Thr Ala Ala Lys Cys Lys Gly Leu Gly Ala Lys Val His Thr Phe  
80 85 90  
Val Val Asp Cys Ser Asn Arg Glu Asp Ile Tyr Ser Ser Ala Lys  
95 100 105  
Lys Val Lys Ala Glu Ile Gly Asp Val Ser Ile Leu Val Asn Asn  
110 115 120  
Ala Gly Val Val Tyr Thr Ser Asp Leu Phe Ala Thr Gln Asp Pro  
125 130 135  
Gln Ile Glu Lys Thr Phe Glu Val Asn Val Leu Ala His Phe Trp  
140 145 150  
Thr Thr Lys Ala Phe Leu Pro Ala Met Thr Lys Asn Asn His Gly  
155 160 165  
His Ile Val Thr Val Ala Ser Ala Ala Gly His Val Ser Val Pro  
170 175 180  
Phe Leu Leu Ala Tyr Cys Ser Ser Lys Phe Ala Ala Val Gly Phe  
185 190 195  
His Lys Thr Leu Thr Asp Glu Leu Ala Ala Leu Gln Ile Thr Gly

0094403.083001



| 200 |     |     |     |     |     |     |     |     |     | 205 |     |     |     | 210 |  |  |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|
| Val | Lys | Thr | Thr | Cys | Leu | Cys | Pro | Asn | Phe | Val | Asn | Thr | Gly | Phe |  |  |  |
|     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     | 225 |  |  |  |
| Ile | Lys | Asn | Pro | Ser | Thr | Ser | Leu | Gly | Pro | Thr | Leu | Glu | Pro | Glu |  |  |  |
|     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |  |  |  |
| Glu | Val | Val | Asn | Arg | Leu | Met | His | Gly | Ile | Leu | Thr | Glu | Gln | Lys |  |  |  |
|     |     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |  |  |  |
| Met | Ile | Phe | Ile | Pro | Ser | Ser | Ile | Ala | Phe | Leu | Thr | Thr | Leu | Glu |  |  |  |
|     |     |     |     | 260 |     |     |     |     | 265 |     |     |     |     | 270 |  |  |  |
| Arg | Ile | Leu | Pro | Glu | Arg | Phe | Leu | Ala | Val | Leu | Lys | Arg | Lys | Ile |  |  |  |
|     |     |     |     | 275 |     |     |     |     | 280 |     |     |     |     | 285 |  |  |  |
| Ser | Val | Lys | Phe | Asp | Ala | Val | Ile | Gly | Tyr | Lys | Met | Lys | Ala | Gln |  |  |  |
|     |     |     |     | 290 |     |     |     |     | 295 |     |     |     |     | 300 |  |  |  |

<210> 38  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 38  
 ggtgaaggca gaaattggag atg 23

<210> 39  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 39  
 atcccatgca tcagcctggt tacc 24

<210> 40  
 <211> 48  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 40  
 gctggtgtag tctatacatc agatttggtt gctacacaag atcctcag 48

<210> 41  
 <211> 1377  
 <212> DNA  
 <213> Homo Sapien

<400> 41

gactagttct cttggagtct gggaggagga aagcggagcc ggcagggagc 50  
gaaccaggac tgggggtgacg gcagggcagg gggcgcttg ccggggagaa 100  
gcgcgggggc tggagcacca ccaactggag ggtccggagt agcgagcgcc 150  
ccgaaggagg ccatcgggga gccgggaggg gggactgca gaggaccccg 200  
gcgtccgggc tcccggtgcc agcgctatga ggccactcct cgtcctgctg 250  
ctcctgggccc tggcgccggg ctgccccca ctggacgaca acaagatccc 300  
cagcctctgc ccggggcacc ccggccttcc aggcacgccg ggccaccatg 350  
gcagccaggg cttgccgggc cgcgatggcc gcgacggccg cgacggcgcg 400  
cccggggctc cgggagagaa aggcgagggc gggaggccgg gactgccggg 450  
acctcgaggg gaccccgggc cgcgaggaga ggcgggaccc gcggggccca 500  
ccgggcctgc cggggagtgc tcggtgcctc cgcgatccgc cttcagcgcc 550  
aagcgctccg agagccgggt gcctccgccg tctgacgcac ctttgcctt 600  
cgaccgcgtg ctggtgaacg agcagggaca ttacgacgcc gtcaccggca 650  
agtccacctg ccagggtgct ggggtctact acttcgccgt ccatgccacc 700  
gtctaccggg ccagcctgca gtttgatctg gtgaagaatg gcgaatccat 750  
tgctctttt ttccagtttt tcgggggggtg gcccagcca gcctcgctct 800  
cggggggggc catggtgagg ctggagcctg aggaccaagt gtgggtgcag 850  
gtgggtgtgg gtgactacat tggcatctat gccagcatca agacagacag 900  
caccttctcc ggatttctgg tgtactccga ctggcacagc tcccagttct 950  
ttgcttagtg cccactgcaa agtgagctca tgctctcact cctagaagga 1000  
gggtgtgagg ctgacaacca ggtcatccag gagggctggc cccctggaa 1050  
tattgtgaat gactagggag gtggggtaga gcactctccg tcctgctgct 1100  
ggcaaggaat ggaacagtg gctgtctgcg atcaggctctg gcagcatggg 1150  
gcagtggctg gatctctgcc caagaccaga ggagtgtgct gtgctggcaa 1200  
gtgtaagtcc ccagttgct ctggtccagg agcccacggg ggggtgctct 1250  
cttctgggc ctctgcttct ctggatcctc cccacccct cctgctcctg 1300  
gggcgggccc ttttctcaga gatcactcaa taaacctaag aaccctcata 1350  
aaaaaaaaa aaaaaaaaaa aaaaaaa 1377

<210> 42

<211> 243  
 <212> PRT  
 <213> Homo Sapien

<400> 42

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| Met | Arg | Pro | Leu | Leu | Val | Leu | Leu | Leu | Leu | Gly | Leu | Ala | Ala | Gly | 1   | 5   | 10  | 15 |
| Ser | Pro | Pro | Leu | Asp | Asp | Asn | Lys | Ile | Pro | Ser | Leu | Cys | Pro | Gly | 20  | 25  | 30  |    |
| His | Pro | Gly | Leu | Pro | Gly | Thr | Pro | Gly | His | His | Gly | Ser | Gln | Gly | 35  | 40  | 45  |    |
| Leu | Pro | Gly | Arg | Asp | Gly | Arg | Asp | Gly | Arg | Asp | Gly | Ala | Pro | Gly | 50  | 55  | 60  |    |
| Ala | Pro | Gly | Glu | Lys | Gly | Glu | Gly | Gly | Arg | Pro | Gly | Leu | Pro | Gly | 65  | 70  | 75  |    |
| Pro | Arg | Gly | Asp | Pro | Gly | Pro | Arg | Gly | Glu | Ala | Gly | Pro | Ala | Gly | 80  | 85  | 90  |    |
| Pro | Thr | Gly | Pro | Ala | Gly | Glu | Cys | Ser | Val | Pro | Pro | Arg | Ser | Ala | 95  | 100 | 105 |    |
| Phe | Ser | Ala | Lys | Arg | Ser | Glu | Ser | Arg | Val | Pro | Pro | Pro | Ser | Asp | 110 | 115 | 120 |    |
| Ala | Pro | Leu | Pro | Phe | Asp | Arg | Val | Leu | Val | Asn | Glu | Gln | Gly | His | 125 | 130 | 135 |    |
| Tyr | Asp | Ala | Val | Thr | Gly | Lys | Phe | Thr | Cys | Gln | Val | Pro | Gly | Val | 140 | 145 | 150 |    |
| Tyr | Tyr | Phe | Ala | Val | His | Ala | Thr | Val | Tyr | Arg | Ala | Ser | Leu | Gln | 155 | 160 | 165 |    |
| Phe | Asp | Leu | Val | Lys | Asn | Gly | Glu | Ser | Ile | Ala | Ser | Phe | Phe | Gln | 170 | 175 | 180 |    |
| Phe | Phe | Gly | Gly | Trp | Pro | Lys | Pro | Ala | Ser | Leu | Ser | Gly | Gly | Ala | 185 | 190 | 195 |    |
| Met | Val | Arg | Leu | Glu | Pro | Glu | Asp | Gln | Val | Trp | Val | Gln | Val | Gly | 200 | 205 | 210 |    |
| Val | Gly | Asp | Tyr | Ile | Gly | Ile | Tyr | Ala | Ser | Ile | Lys | Thr | Asp | Ser | 215 | 220 | 225 |    |
| Thr | Phe | Ser | Gly | Phe | Leu | Val | Tyr | Ser | Asp | Trp | His | Ser | Ser | Pro | 230 | 235 | 240 |    |
| Val | Phe | Ala |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |

<210> 43  
 <211> 24

<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 43  
tacaggcca gtcaggacca gggg 24

<210> 44  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 44  
agccagcctc gctctcgg 18

<210> 45  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 45  
gtctgcgatc aggtctgg 18

<210> 46  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 46  
gaaagaggca atggattcgc 20

<210> 47  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 47  
gacttacact tgccagcaca gcac 24

<210> 48  
<211> 45  
<212> DNA  
<213> Artificial Sequence

09944403-083001

<220>

<223> Synthetic oligonucleotide probe

<400> 48

ggagcaccac caactggagg gtccggagta gcgagcgccc cgaag 45

<210> 49

<211> 1876

<212> DNA

<213> Homo Sapien

<400> 49

ctcttttgtc caccagccca gctgactcc tggagattgt gaatagctcc 50

atccagcctg agaaacaagc cgggtggctg agccaggctg tgcacggagc 100

acctgacggg cccaacagac ccatgctgca tccagagacc tcccctggcc 150

gggggcatct cctggctgtg ctcttgccc tccttggcac cacctgggca 200

gaggtgtggc caccacagct gcaggagcag gctccgatgg ccggagccct 250

gaacaggaag gagagtttct tgctcctctc cctgcacaac cgctgcgca 300

gctgggtcca gccccctgcg gctgacatgc ggaggctgga ctggagtgc 350

agcctggccc aactggetca agccagggca gccctctgtg gaatcccaac 400

cccgagcctg gcatccggcc tgtggcgcac cctgcaagtg ggctggaaca 450

tgcagctgct gcccgcgggc ttggcgctct ttgttgaagt ggtcagccta 500

tggtttgtag aggggtagcg gtacagccac gcggcaggag agtgtgctcg 550

caacgccacc tgcacccact acacgcagct cgtgtgggcc acctcaagcc 600

agctgggctg tgggcggcac ctgtgctctg caggccagac agcgatagaa 650

gcctttgtct gtgcctactc ccccgagggc aactgggagg tcaacgggaa 700

gacaatcatc ccctataaga agggtgcttg gtgttcgctc tgcacagcca 750

gtgtctcagg ctgcttcaaa gcctgggacc atgcaggggg gctctgtgag 800

gtccccagga atccttgctg catgagctgc cagaaccatg gacgtctcaa 850

catcagcacc tgccactgcc actgtcccc tggctacacg ggcagatact 900

gccaagtgcg gtgcagcctg cagtgtgtgc acggccggtt ccgggaggag 950

gagtgctcgt gcgtctgtga catcggctac gggggagccc agtgtgccac 1000

caaggtgcat tttcccttcc acacctgtga cctgaggatc gacggagact 1050

gcttcatggg gtcttcagag gcagacacct attacagagc caggatgaaa 1100

tgtcagagga aaggcggggg gctggcccag atcaagagcc agaaagtgc 1150

094443.03004

ggacatectc gccttctatc tgggccgcct ggagaccacc aacgaggtga 1200  
 ctgacagtga cttcgagacc aggaacttct ggatcgggct cacctacaag 1250  
 accgccaagg actccttccg ctgggccaca ggggagcacc aggccttcac 1300  
 cagttttgcc tttgggcagc ctgacaacca cgggctggtg tggctgagtg 1350  
 ctgccatggg gtttggcaac tgcgtggagc tgcaggcttc agctgccttc 1400  
 aactggaacg accagcgctg caaaaccga aaccgttaca tctgccagtt 1450  
 tgcccaggag cacatctccc ggtggggccc agggctctga ggctgacca 1500  
 catggtcccc tcgctgccc tgggagcacc ggctctgctt acctgtctgc 1550  
 ccacctgtct ggaacaaggg ccaggttaag accacatgcc tcatgtccaa 1600  
 agaggtctca gaccttgac aatgccagaa gttgggcaga gagaggcagg 1650  
 gaggccagtg agggccaggg agtgagtgtt agaagaagct ggggcccttc 1700  
 gcctgctttt gattgggaag atgggcttca attagatggc gaaggagagg 1750  
 acaccgccag tgggtcaaaa aggtctgtct cttccacctg gccagaccc 1800  
 tgtggggcag cggagcttcc ctgtggcatg aacccacgg ggtattaaat 1850  
 tatgaatcag ctgaaaaaaaa aaaaaa 1876

<210> 50  
 <211> 455  
 <212> PRT  
 <213> Homo Sapien

<400> 50  
 Met Leu His Pro Glu Thr Ser Pro Gly Arg Gly His Leu Leu Ala  
 1 5 10 15  
 Val Leu Leu Ala Leu Leu Gly Thr Thr Trp Ala Glu Val Trp Pro  
 20 25 30  
 Pro Gln Leu Gln Glu Gln Ala Pro Met Ala Gly Ala Leu Asn Arg  
 35 40 45  
 Lys Glu Ser Phe Leu Leu Leu Ser Leu His Asn Arg Leu Arg Ser  
 50 55 60  
 Trp Val Gln Pro Pro Ala Ala Asp Met Arg Arg Leu Asp Trp Ser  
 65 70 75  
 Asp Ser Leu Ala Gln Leu Ala Gln Ala Arg Ala Ala Leu Cys Gly  
 80 85 90  
 Ile Pro Thr Pro Ser Leu Ala Ser Gly Leu Trp Arg Thr Leu Gln  
 95 100 105  
 Val Gly Trp Asn Met Gln Leu Leu Pro Ala Gly Leu Ala Ser Phe

|     |     |     |     |            |     |     |     |     |            |     |     |     |     |            |
|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|
|     |     |     |     | 110        |     |     |     |     | 115        |     |     |     |     | 120        |
| Val | Glu | Val | Val | Ser<br>125 | Leu | Trp | Phe | Ala | Glu<br>130 | Gly | Gln | Arg | Tyr | Ser<br>135 |
| His | Ala | Ala | Gly | Glu<br>140 | Cys | Ala | Arg | Asn | Ala<br>145 | Thr | Cys | Thr | His | Tyr<br>150 |
| Thr | Gln | Leu | Val | Trp<br>155 | Ala | Thr | Ser | Ser | Gln<br>160 | Leu | Gly | Cys | Gly | Arg<br>165 |
| His | Leu | Cys | Ser | Ala<br>170 | Gly | Gln | Thr | Ala | Ile<br>175 | Glu | Ala | Phe | Val | Cys<br>180 |
| Ala | Tyr | Ser | Pro | Gly<br>185 | Gly | Asn | Trp | Glu | Val<br>190 | Asn | Gly | Lys | Thr | Ile<br>195 |
| Ile | Pro | Tyr | Lys | Lys<br>200 | Gly | Ala | Trp | Cys | Ser<br>205 | Leu | Cys | Thr | Ala | Ser<br>210 |
| Val | Ser | Gly | Cys | Phe<br>215 | Lys | Ala | Trp | Asp | His<br>220 | Ala | Gly | Gly | Leu | Cys<br>225 |
| Glu | Val | Pro | Arg | Asn<br>230 | Pro | Cys | Arg | Met | Ser<br>235 | Cys | Gln | Asn | His | Gly<br>240 |
| Arg | Leu | Asn | Ile | Ser<br>245 | Thr | Cys | His | Cys | His<br>250 | Cys | Pro | Pro | Gly | Tyr<br>255 |
| Thr | Gly | Arg | Tyr | Cys<br>260 | Gln | Val | Arg | Cys | Ser<br>265 | Leu | Gln | Cys | Val | His<br>270 |
| Gly | Arg | Phe | Arg | Glu<br>275 | Glu | Glu | Cys | Ser | Cys<br>280 | Val | Cys | Asp | Ile | Gly<br>285 |
| Tyr | Gly | Gly | Ala | Gln<br>290 | Cys | Ala | Thr | Lys | Val<br>295 | His | Phe | Pro | Phe | His<br>300 |
| Thr | Cys | Asp | Leu | Arg<br>305 | Ile | Asp | Gly | Asp | Cys<br>310 | Phe | Met | Val | Ser | Ser<br>315 |
| Glu | Ala | Asp | Thr | Tyr<br>320 | Tyr | Arg | Ala | Arg | Met<br>325 | Lys | Cys | Gln | Arg | Lys<br>330 |
| Gly | Gly | Val | Leu | Ala<br>335 | Gln | Ile | Lys | Ser | Gln<br>340 | Lys | Val | Gln | Asp | Ile<br>345 |
| Leu | Ala | Phe | Tyr | Leu<br>350 | Gly | Arg | Leu | Glu | Thr<br>355 | Thr | Asn | Glu | Val | Thr<br>360 |
| Asp | Ser | Asp | Phe | Glu<br>365 | Thr | Arg | Asn | Phe | Trp<br>370 | Ile | Gly | Leu | Thr | Tyr<br>375 |
| Lys | Thr | Ala | Lys | Asp<br>380 | Ser | Phe | Arg | Trp | Ala<br>385 | Thr | Gly | Glu | His | Gln<br>390 |
| Ala | Phe | Thr | Ser | Phe<br>395 | Ala | Phe | Gly | Gln | Pro<br>400 | Asp | Asn | His | Gly | Leu<br>405 |

Val Trp Leu Ser Ala Ala Met Gly Phe Gly Asn Cys Val Glu Leu  
410 415 420

Gln Ala Ser Ala Ala Phe Asn Trp Asn Asp Gln Arg Cys Lys Thr  
425 430 435

Arg Asn Arg Tyr Ile Cys Gln Phe Ala Gln Glu His Ile Ser Arg  
440 445 450

Trp Gly Pro Gly Ser  
455

<210> 51  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 51  
aggaacttct ggatcgggct cacc 24

<210> 52  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 52  
gggtctgggc caggtggaag agag 24

<210> 53  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 53  
gccaaaggact ccttccgctg ggccacaggg gagcaccagg ccttc 45

<210> 54  
<211> 2331  
<212> DNA  
<213> Homo Sapien

<400> 54  
cggacgcgtg ggctgggctg tgcaaagcgt gtcccgccgg gtccccgagc 50  
gtcccgccgc ctgccccgc catgctcctg ctgctggggc tgtgctggg 100  
gctgtccctg tgtgtggggt cgcaggaaga ggcgcagagc tggggccact 150  
cttcggagca ggatggactc aggggtccga ggcaagtcag actgttgag 200



aggctgaaaa ccaaaccctt gatgacagaa ttctcagtga agtctacat 250  
catttcccgt tatgccttca ctacggtttc ctgcagaatg ctgaacagag 300  
cttctgaaga ccaggacatt gagttccaga tgcagattcc agctgcagct 350  
ttcatcacca acttcactat gcttattgga gacaagggtgt atcagggcga 400  
aattacagag agagaaaaga agagtgggtga tagggtaaaa gagaaaagga 450  
ataaaaccac agaagaaaat ggagagaagg ggactgaaat attcagagct 500  
tctgcagtga ttcccagcaa ggacaaagcc gcctttttcc tgagttatga 550  
ggagcttctg cagagggcgc tgggcaagta cgagcacagc atcagcgtgc 600  
ggccccagca gctgtccggg aggctgagcg tggacgtgaa tatectggag 650  
agcgcgggca tgcacccct ggaggtgctg ccgcttcaca acagcaggca 700  
gaggggcagt gggcgcgggg aagatgattc tgggcctccc ccatctactg 750  
tcattaacca aaatgaaaca ttgccaaca taatttttaa acctactgta 800  
gtacaacaag ccaggattgc ccagaatgga attttgggag actttatcat 850  
tagatatgac gtcaatagag aacagagcat tggggacatc caggttctaa 900  
atggctattt tgtgcactac ttgtctcta aagaccttc tcttttacc 950  
aagaatgtgg tattcgtgct tgacagcagt gcttctatgg tgggaaccaa 1000  
actccggcag accaaggatg cctctctcac aattctccat gacctccgac 1050  
cccaggaccg tttcagtatc attggatttt ccaaccggat caaagtatgg 1100  
aaggaccact tgatatcagt cactccagac agcatcaggg atgggaaagt 1150  
gtacattcac catatgtcac ccactggagg cacagacatc aacggggccc 1200  
tgcagagggc catcaggctc ctcaacaagt acgtggccca cagtggcatt 1250  
ggagaccgga gcgtgtccct catcgtcttc ctgacggatg ggaagccac 1300  
ggtcggggag acgcacaccc tcaagatcct caacaacacc cgagaggccg 1350  
cccagggcca agtctgcac ttaccattg gcatcggcaa cgacgtggac 1400  
ttcaggctgc tggagaaact gtcgctggag aactgtggcc tcacacggcg 1450  
cgtgcacgag gaggaggacg caggctcgca gctcatcggg ttctacgatg 1500  
aaatcaggac cccgctctc tctgacatcc gcatcgatta tccccccagc 1550  
tcagtggctg aggccaccaa gacctgttc cccaactact tcaacggctc 1600  
ggagatcatc attgcgggga agctgggtga caggaagctg gatcacctgc 1650

acgtggaggt caccgccagc aacagtaaga aattcatcat cctgaagaca 1700  
gatgtgcctg tgcggcctca gaaggcaggg aaagatgtca caggaagccc 1750  
caggcctgga ggcgatggag agggggacac caaccacatc gagcgtctct 1800  
ggagctacct caccacaaag gagctgctga gtccttggt gcaaagtac 1850  
gatgaaccgg agaaggagcg gctgcggcag cgggcccagg ccctggctgt 1900  
gagctaccgc ttctcactc ccttcacctc catgaagctg agggggccgg 1950  
tcccacgcat ggatggcctg gaggaggccc acggcatgtc ggctgccatg 2000  
ggaccggaac cgggtggtgca gagcgtgcga ggagctggca cgcagccagg 2050  
acctttgctc aagaagccaa actccgtcaa aaaaaaacia aacaaaacia 2100  
aaaaaagaca tgggagagat ggtgtttttc ctctccacca cctggggata 2150  
cgatgagaag atggccacct gcaagccagg aagacggccc tcaccagaca 2200  
ccatgtctgc tggcaccttg atcttgacc tccagcctc cagaactgtg 2250  
agaaataaat gtgttttgtt taagctaaaa aaaaaaaaaa aaaaaaaaaa 2300  
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa a 2331

<210> 55  
<211> 694  
<212> PRT  
<213> Homo Sapien

<400> 55  
Met Leu Leu Leu Leu Gly Leu Cys Leu Gly Leu Ser Leu Cys Val  
1 5 10 15  
Gly Ser Gln Glu Glu Ala Gln Ser Trp Gly His Ser Ser Glu Gln  
20 25 30  
Asp Gly Leu Arg Val Pro Arg Gln Val Arg Leu Leu Gln Arg Leu  
35 40 45  
Lys Thr Lys Pro Leu Met Thr Glu Phe Ser Val Lys Ser Thr Ile  
50 55 60  
Ile Ser Arg Tyr Ala Phe Thr Thr Val Ser Cys Arg Met Leu Asn  
65 70 75  
Arg Ala Ser Glu Asp Gln Asp Ile Glu Phe Gln Met Gln Ile Pro  
80 85 90  
Ala Ala Ala Phe Ile Thr Asn Phe Thr Met Leu Ile Gly Asp Lys  
95 100 105  
Val Tyr Gln Gly Glu Ile Thr Glu Arg Glu Lys Lys Ser Gly Asp  
110 115 120



09944403-083001

|   |     |     |
|---|-----|-----|
| 410   | 415 | 420 |
| Asn Asn Thr Arg Glu Ala Ala Arg Gly Gln Val Cys Ile Phe Thr |     |     |
| 425   | 430 | 435 |
| Ile Gly Ile Gly Asn Asp Val Asp Phe Arg Leu Leu Glu Lys Leu |     |     |
| 440   | 445 | 450 |
| Ser Leu Glu Asn Cys Gly Leu Thr Arg Arg Val His Glu Glu Glu |     |     |
| 455   | 460 | 465 |
| Asp Ala Gly Ser Gln Leu Ile Gly Phe Tyr Asp Glu Ile Arg Thr |     |     |
| 470   | 475 | 480 |
| Pro Leu Leu Ser Asp Ile Arg Ile Asp Tyr Pro Pro Ser Ser Val |     |     |
| 485   | 490 | 495 |
| Val Gln Ala Thr Lys Thr Leu Phe Pro Asn Tyr Phe Asn Gly Ser |     |     |
| 500   | 505 | 510 |
| Glu Ile Ile Ile Ala Gly Lys Leu Val Asp Arg Lys Leu Asp His |     |     |
| 515   | 520 | 525 |
| Leu His Val Glu Val Thr Ala Ser Asn Ser Lys Lys Phe Ile Ile |     |     |
| 530   | 535 | 540 |
| Leu Lys Thr Asp Val Pro Val Arg Pro Gln Lys Ala Gly Lys Asp |     |     |
| 545   | 550 | 555 |
| Val Thr Gly Ser Pro Arg Pro Gly Gly Asp Gly Glu Gly Asp Thr |     |     |
| 560   | 565 | 570 |
| Asn His Ile Glu Arg Leu Trp Ser Tyr Leu Thr Thr Lys Glu Leu |     |     |
| 575   | 580 | 585 |
| Leu Ser Ser Trp Leu Gln Ser Asp Asp Glu Pro Glu Lys Glu Arg |     |     |
| 590   | 595 | 600 |
| Leu Arg Gln Arg Ala Gln Ala Leu Ala Val Ser Tyr Arg Phe Leu |     |     |
| 605   | 610 | 615 |
| Thr Pro Phe Thr Ser Met Lys Leu Arg Gly Pro Val Pro Arg Met |     |     |
| 620   | 625 | 630 |
| Asp Gly Leu Glu Glu Ala His Gly Met Ser Ala Ala Met Gly Pro |     |     |
| 635   | 640 | 645 |
| Glu Pro Val Val Gln Ser Val Arg Gly Ala Gly Thr Gln Pro Gly |     |     |
| 650   | 655 | 660 |
| Pro Leu Leu Lys Lys Pro Asn Ser Val Lys Lys Lys Gln Asn Lys |     |     |
| 665   | 670 | 675 |
| Thr Lys Lys Arg His Gly Arg Asp Gly Val Phe Pro Leu His His |     |     |
| 680   | 685 | 690 |
| Leu Gly Ile Arg   |     |     |

<210> 56  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 56  
gtgggaacca aactccggca gacc 24

<210> 57  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 57  
cacatcgagc gtctctgg 18

<210> 58  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 58  
agccgctcct tctccggttc atcg 24

<210> 59  
<211> 48  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 59  
tggaaggacc acttgatatc agtcactcca gacagcatca gggatggg 48

<210> 60  
<211> 1413  
<212> DNA  
<213> Homo Sapien

<400> 60  
cggacgcgtg ggggtgcccga catggcgagt gtagtgctgc cgagcggatc 50  
ccagtgtgcg gcggcagcgg cggcggcggc gcctcccggg ctccggcttc 100  
tgctgttgct cttctccgcc gcggcactga tccccacagg tgatgggcag 150  
aatctgttta cgaaagacgt gacagtgatc gagggagagg ttgcgaccat 200

09944403-083001

cagttgccaa gtcaataaga gtgacgactc tgtgattcag ctactgaatc 250  
 ccaacaggca gaccatttat ttcaggaggact tcaggccttt gaaggacagc 300  
 aggttttcagt tgctgaattt ttctagcagt gaactcaaag tatcattgac 350  
 aaacgtctca atttctgatg aaggaagata cttttgccag ctctataaccg 400  
 atccccacaca ggaaagttac accaccatca cagtccctggc cccaccacgt 450  
 aatctgatga tcgatatcca gaaagacact gcggtggaag gtgaggagat 500  
 tgaagtcaac tgcactgcta tggccagcaa gccagccacg actatcaggt 550  
 ggttcaaagg gaacacagag ctaaaaggca aatcggagggt ggaagagtgg 600  
 tcagacatgt aactgtgac cagtcagctg atgctgaagg tgcacaagga 650  
 ggacgatggg gtcccagtga tctgccagggt ggagcaccct gcggtcactg 700  
 gaaacctgca gaccagcgg tatctagaag tacagtataa gcctcaagtg 750  
 cacattcaga tgacttatcc tctacaaggc ttaaccggg aaggggacgc 800  
 gcttgagtta acatgtgaag ccacgggaa gccccagcct gtgatggtaa 850  
 cttgggtgag agtcgatgat gaaatgcctc aacacgccgt actgtctggg 900  
 cccaacctgt tcatcaataa cctaaacaaa acagataatg gtacataaccg 950  
 ctgtgaagct tcaaacatag tggggaaagc tccactggat tatatgctgt 1000  
 atgtatacga tccccccaca actatccctc ctcccacac aaccaccacc 1050  
 accaccacca ccaccaccac caccatcctt accatcatca cagattcccg 1100  
 agcaggtgaa gaaggctcga tcagggcagt ggatcatgcc gtgatcggtg 1150  
 gcgtcgtggc ggtggtggtg ttcgccatgc tgtgcttgct catcattctg 1200  
 gggcgctatt ttgccagaca taaagggtaca tacttcactc atgaagccaa 1250  
 aggagccgat gacgcagcag acgcagacac agctataatc aatgcagaag 1300  
 gaggacagaa caactccgaa gaaaagaaag agtacttcat ctagatcagc 1350  
 ctttttgttt caatgaggtg tccaactggc cctattttaga tgataaagag 1400  
 acagtgatat tgg 1413

<210> 61  
 <211> 440  
 <212> PRT  
 <213> Homo Sapien

<400> 61  
 Met Ala Ser Val Val Leu Pro Ser Gly Ser Gln Cys Ala Ala Ala  
 1 5 10 15

0344403-033001

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|-----|-----|-----|
| Ala | Ala | Ala | Ala | Ala | Pro | Pro | Gly | Leu | Arg | Leu | Leu | Leu | Leu | Leu |  | 20  | 25  | 30  |
| Phe | Ser | Ala | Ala | Ala | Leu | Ile | Pro | Thr | Gly | Asp | Gly | Gln | Asn | Leu |  | 35  | 40  | 45  |
| Phe | Thr | Lys | Asp | Val | Thr | Val | Ile | Glu | Gly | Glu | Val | Ala | Thr | Ile |  | 50  | 55  | 60  |
| Ser | Cys | Gln | Val | Asn | Lys | Ser | Asp | Asp | Ser | Val | Ile | Gln | Leu | Leu |  | 65  | 70  | 75  |
| Asn | Pro | Asn | Arg | Gln | Thr | Ile | Tyr | Phe | Arg | Asp | Phe | Arg | Pro | Leu |  | 80  | 85  | 90  |
| Lys | Asp | Ser | Arg | Phe | Gln | Leu | Leu | Asn | Phe | Ser | Ser | Ser | Glu | Leu |  | 95  | 100 | 105 |
| Lys | Val | Ser | Leu | Thr | Asn | Val | Ser | Ile | Ser | Asp | Glu | Gly | Arg | Tyr |  | 110 | 115 | 120 |
| Phe | Cys | Gln | Leu | Tyr | Thr | Asp | Pro | Pro | Gln | Glu | Ser | Tyr | Thr | Thr |  | 125 | 130 | 135 |
| Ile | Thr | Val | Leu | Val | Pro | Pro | Arg | Asn | Leu | Met | Ile | Asp | Ile | Gln |  | 140 | 145 | 150 |
| Lys | Asp | Thr | Ala | Val | Glu | Gly | Glu | Glu | Ile | Glu | Val | Asn | Cys | Thr |  | 155 | 160 | 165 |
| Ala | Met | Ala | Ser | Lys | Pro | Ala | Thr | Thr | Ile | Arg | Trp | Phe | Lys | Gly |  | 170 | 175 | 180 |
| Asn | Thr | Glu | Leu | Lys | Gly | Lys | Ser | Glu | Val | Glu | Glu | Trp | Ser | Asp |  | 185 | 190 | 195 |
| Met | Tyr | Thr | Val | Thr | Ser | Gln | Leu | Met | Leu | Lys | Val | His | Lys | Glu |  | 200 | 205 | 210 |
| Asp | Asp | Gly | Val | Pro | Val | Ile | Cys | Gln | Val | Glu | His | Pro | Ala | Val |  | 215 | 220 | 225 |
| Thr | Gly | Asn | Leu | Gln | Thr | Gln | Arg | Tyr | Leu | Glu | Val | Gln | Tyr | Lys |  | 230 | 235 | 240 |
| Pro | Gln | Val | His | Ile | Gln | Met | Thr | Tyr | Pro | Leu | Gln | Gly | Leu | Thr |  | 245 | 250 | 255 |
| Arg | Glu | Gly | Asp | Ala | Leu | Glu | Leu | Thr | Cys | Glu | Ala | Ile | Gly | Lys |  | 260 | 265 | 270 |
| Pro | Gln | Pro | Val | Met | Val | Thr | Trp | Val | Arg | Val | Asp | Asp | Glu | Met |  | 275 | 280 | 285 |
| Pro | Gln | His | Ala | Val | Leu | Ser | Gly | Pro | Asn | Leu | Phe | Ile | Asn | Asn |  | 290 | 295 | 300 |
| Leu | Asn | Lys | Thr | Asp | Asn | Gly | Thr | Tyr | Arg | Cys | Glu | Ala | Ser | Asn |  |     |     |     |







gccagcctgc gcctgccccg cctgctgctg ctggacctca gccacaacag 450  
 cctcctggcc ctggagcccc gcacccctgga cactgccaac gtggaggcgc 500  
 tgcggctggc tggctctggg ctgcagcagc tggacgaggg gctcttcagc 550  
 cgcttgcgca acctccacga cctggatgtg tccgacaacc agctggagcg 600  
 agtgccacct gtgatccgag gcctccgggg cctgacgcgc ctgaggctgg 650  
 ccggcaaac ccgcattgcc cagctgcggc ccgaggacct ggccggcctg 700  
 gctgccctgc aggagctgga tgtgagcaac ctaagcctgc aggcctgcc 750  
 tggcgacctc tcgggcctct tccccgcct gcggctgctg gcagctgcc 800  
 gcaaccctt caactgcgtg tgcctcctga gctgggttg ccctgggtg 850  
 cgcgagagcc acgtcacact ggccagccct gaggagagc gctgccactt 900  
 ccgccccag aacgctggcc ggctgctcct ggagcttgac tacgccgact 950  
 ttggtgccc agccaccacc accacagcca cagtgccac cacgaggccc 1000  
 gtggtgcggg agcccacagc cttgtcttct agcttggtc ctacctggt 1050  
 tagccccaca gcgcgggcca ctgaggcccc cagcccgccc tccactgccc 1100  
 caccgactgt agggcctgt cccagcccc aggactgccc accgtccacc 1150  
 tgcccaatg ggggcacatg ccacctgggg acacggcacc acctggcgctg 1200  
 cttgtgcccc gaaggcttca cgggcctgta ctgtgagagc cagatggggc 1250  
 aggggacacg gccagccct acaccagtca cgcgaggcc accacgggtcc 1300  
 ctgacctggt gcacgagcc ggtgagcccc acctccctgc gcgtggggct 1350  
 gcagcgctac ctccagggga gctccgtgca gctcaggagc ctccgtctca 1400  
 cctatcgcaa cctatcgggc cctgataagc ggctgggtgac gctgcgactg 1450  
 cctgcctcgc tcgctgagta cacggtcacc cagctgcggc ccaacgccac 1500  
 ttactccgtc tgtgtcatgc ctttggggcc cgggcgggtg ccggaggggc 1550  
 agggaggcctg cggggaggcc catacacccc cagccgtcca ctccaaccac 1600  
 gccccagtca ccagggccc cgagggaac ctgcgcctcc tcattgcgcc 1650  
 cgccctggcc gcgggtgctc tggccgcgct ggctgcgggtg ggggcagcct 1700  
 actgtgtgcg gcgggggcgg gccatggcag cagcggctca ggacaaagg 1750  
 caggtggggc caggggctgg gccctggaa ctggaggag tgaaggctcc 1800  
 cttggagcca ggcccgaagg caacagaggg cggtggagag gccctgccc 1850

gcgggtctga gtgtgaggtg ccactcatgg gcttcccagg gcctggcctc 1900  
cagtcacccc tccacgcaaa gccctacatc taagccagag agagacaggg 1950  
cagctggggc cgggctctca gccagtgaga tggccagccc cctcctgctg 2000  
ccacaccacg taagttctca gtcccaacct cggggatgtg tgcagacagg 2050  
gctgtgtgac cacagctggg cctgttccc tctggacctc ggtctcctca 2100  
tctgtgagat gctgtggccc agctgacgag ccctaacgtc cccagaaccg 2150  
agtgcctatg aggacagtgt ccgcctgcc ctccgcaacg tgcagtcctt 2200  
gggcacggcg ggccctgcca tgtgtgtgta acgcatgcct gggccctgct 2250  
gggctctccc actccaggcg gaccctgggg gccagtgaag gaagctcccg 2300  
gaaagagcag agggagagcg ggtaggcggc tgtgtgactc tagtcttggc 2350  
cccaggaagc gaaggaacaa aagaaactgg aaaggaagat gctttaggaa 2400  
catgttttgc ttttttaaaa tatatatata tttataagag atcctttccc 2450  
atttattctg ggaagatggt tttcaaactc agagacaagg actttgggtt 2500  
ttgtaagaca aacgatgata tgaaggcctt ttgtaagaaa aaataaaaaa 2550  
aaaaa 2555

<210> 69  
<211> 598  
<212> PRT  
<213> Homo Sapien

<400> 69  
Met Cys Ser Arg Val Pro Leu Leu Leu Pro Leu Leu Leu Leu Leu  
1 5 10 15  
Ala Leu Gly Pro Gly Val Gln Gly Cys Pro Ser Gly Cys Gln Cys  
20 25 30  
Ser Gln Pro Gln Thr Val Phe Cys Thr Ala Arg Gln Gly Thr Thr  
35 40 45  
Val Pro Arg Asp Val Pro Pro Asp Thr Val Gly Leu Tyr Val Phe  
50 55 60  
Glu Asn Gly Ile Thr Met Leu Asp Ala Ser Ser Phe Ala Gly Leu  
65 70 75  
Pro Gly Leu Gln Leu Leu Asp Leu Ser Gln Asn Gln Ile Ala Ser  
80 85 90  
Leu Arg Leu Pro Arg Leu Leu Leu Leu Asp Leu Ser His Asn Ser  
95 100 105  
Leu Leu Ala Leu Glu Pro Gly Ile Leu Asp Thr Ala Asn Val Glu

| 110 |     |     |     |     | 115 |     |     |     |     | 120 |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Leu | Arg | Leu | Ala | Gly | Leu | Gly | Leu | Gln | Gln | Leu | Asp | Glu | Gly |
|     |     |     |     | 125 |     |     |     |     | 130 |     |     |     |     | 135 |
| Leu | Phe | Ser | Arg | Leu | Arg | Asn | Leu | His | Asp | Leu | Asp | Val | Ser | Asp |
|     |     |     |     | 140 |     |     |     |     | 145 |     |     |     |     | 150 |
| Asn | Gln | Leu | Glu | Arg | Val | Pro | Pro | Val | Ile | Arg | Gly | Leu | Arg | Gly |
|     |     |     |     | 155 |     |     |     |     | 160 |     |     |     |     | 165 |
| Leu | Thr | Arg | Leu | Arg | Leu | Ala | Gly | Asn | Thr | Arg | Ile | Ala | Gln | Leu |
|     |     |     |     | 170 |     |     |     |     | 175 |     |     |     |     | 180 |
| Arg | Pro | Glu | Asp | Leu | Ala | Gly | Leu | Ala | Ala | Leu | Gln | Glu | Leu | Asp |
|     |     |     |     | 185 |     |     |     |     | 190 |     |     |     |     | 195 |
| Val | Ser | Asn | Leu | Ser | Leu | Gln | Ala | Leu | Pro | Gly | Asp | Leu | Ser | Gly |
|     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |     | 210 |
| Leu | Phe | Pro | Arg | Leu | Arg | Leu | Leu | Ala | Ala | Ala | Arg | Asn | Pro | Phe |
|     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     | 225 |
| Asn | Cys | Val | Cys | Pro | Leu | Ser | Trp | Phe | Gly | Pro | Trp | Val | Arg | Glu |
|     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |
| Ser | His | Val | Thr | Leu | Ala | Ser | Pro | Glu | Glu | Thr | Arg | Cys | His | Phe |
|     |     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |
| Pro | Pro | Lys | Asn | Ala | Gly | Arg | Leu | Leu | Leu | Glu | Leu | Asp | Tyr | Ala |
|     |     |     |     | 260 |     |     |     |     | 265 |     |     |     |     | 270 |
| Asp | Phe | Gly | Cys | Pro | Ala | Thr | Thr | Thr | Thr | Ala | Thr | Val | Pro | Thr |
|     |     |     |     | 275 |     |     |     |     | 280 |     |     |     |     | 285 |
| Thr | Arg | Pro | Val | Val | Arg | Glu | Pro | Thr | Ala | Leu | Ser | Ser | Ser | Leu |
|     |     |     |     | 290 |     |     |     |     | 295 |     |     |     |     | 300 |
| Ala | Pro | Thr | Trp | Leu | Ser | Pro | Thr | Ala | Pro | Ala | Thr | Glu | Ala | Pro |
|     |     |     |     | 305 |     |     |     |     | 310 |     |     |     |     | 315 |
| Ser | Pro | Pro | Ser | Thr | Ala | Pro | Pro | Thr | Val | Gly | Pro | Val | Pro | Gln |
|     |     |     |     | 320 |     |     |     |     | 325 |     |     |     |     | 330 |
| Pro | Gln | Asp | Cys | Pro | Pro | Ser | Thr | Cys | Leu | Asn | Gly | Gly | Thr | Cys |
|     |     |     |     | 335 |     |     |     |     | 340 |     |     |     |     | 345 |
| His | Leu | Gly | Thr | Arg | His | His | Leu | Ala | Cys | Leu | Cys | Pro | Glu | Gly |
|     |     |     |     | 350 |     |     |     |     | 355 |     |     |     |     | 360 |
| Phe | Thr | Gly | Leu | Tyr | Cys | Glu | Ser | Gln | Met | Gly | Gln | Gly | Thr | Arg |
|     |     |     |     | 365 |     |     |     |     | 370 |     |     |     |     | 375 |
| Pro | Ser | Pro | Thr | Pro | Val | Thr | Pro | Arg | Pro | Pro | Arg | Ser | Leu | Thr |
|     |     |     |     | 380 |     |     |     |     | 385 |     |     |     |     | 390 |
| Leu | Gly | Ile | Glu | Pro | Val | Ser | Pro | Thr | Ser | Leu | Arg | Val | Gly | Leu |
|     |     |     |     | 395 |     |     |     |     | 400 |     |     |     |     | 405 |

|                 |                     |                         |     |     |     |
|-----------------|---------------------|-------------------------|-----|-----|-----|
| Gln Arg Tyr Leu | Gln Gly Ser Ser Val | Gln Leu Arg Ser Leu Arg | 410 | 415 | 420 |
| Leu Thr Tyr Arg | Asn Leu Ser Gly Pro | Asp Lys Arg Leu Val Thr | 425 | 430 | 435 |
| Leu Arg Leu Pro | Ala Ser Leu Ala Glu | Tyr Thr Val Thr Gln Leu | 440 | 445 | 450 |
| Arg Pro Asn Ala | Thr Tyr Ser Val Cys | Val Met Pro Leu Gly Pro | 455 | 460 | 465 |
| Gly Arg Val Pro | Glu Gly Glu Glu Ala | Cys Gly Glu Ala His Thr | 470 | 475 | 480 |
| Pro Pro Ala Val | His Ser Asn His Ala | Pro Val Thr Gln Ala Arg | 485 | 490 | 495 |
| Glu Gly Asn Leu | Pro Leu Leu Ile Ala | Pro Ala Leu Ala Ala Val | 500 | 505 | 510 |
| Leu Leu Ala Ala | Leu Ala Ala Val Gly | Ala Ala Tyr Cys Val Arg | 515 | 520 | 525 |
| Arg Gly Arg Ala | Met Ala Ala Ala Ala | Gln Asp Lys Gly Gln Val | 530 | 535 | 540 |
| Gly Pro Gly Ala | Gly Pro Leu Glu Leu | Glu Gly Val Lys Val Pro | 545 | 550 | 555 |
| Leu Glu Pro Gly | Pro Lys Ala Thr Glu | Gly Gly Gly Glu Ala Leu | 560 | 565 | 570 |
| Pro Ser Gly Ser | Glu Cys Glu Val Pro | Leu Met Gly Phe Pro Gly | 575 | 580 | 585 |
| Pro Gly Leu Gln | Ser Pro Leu His Ala | Lys Pro Tyr Ile         | 590 | 595 |     |

<210> 70  
 <211> 22  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 70  
 ccctccactg ccccaccgac tg 22

<210> 71  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

09944403-083001

<400> 71  
cggttctggg gacgttaggg ctcg 24

<210> 72  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 72  
ctgcccaccg tccacctgcc tcaat 25

<210> 73  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 73  
aggactgccc accgtccacc tgcctcaatg ggggcacatg ccacc 45

<210> 74  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic Oligonucleotide Probe

<400> 74  
acgcaaagcc ctacatctaa gccagagaga gacagggcag ctggg 45

<210> 75  
<211> 1077  
<212> DNA  
<213> Homo Sapien

<400> 75  
ggcactagga caaccttctt ccttctgca ccactgcccg tacccttacc 50  
cgccccgcca cctccttgct accccactct tgaaaccaca gctgttgga 100  
gggtccccag ctcatgccag cctcatctcc tttcttgcta gccccaaag 150  
ggcctccagg caacatgggg ggcccagtca gagagccggc actctcagtt 200  
gccctctggt tgagttgggg ggcagctctg ggggccgtgg cttgtgcat 250  
ggctctgctg acccaacaaa cagagctgca gagcctcagg agagaggtga 300  
gccggctgca ggggacagga ggcccctccc agaatgggga agggatatcc 350  
tggcagagtc tcccggagca gagttccgat gccctggaag cctgggagaa 400

tggggagaga tcccggaaaa ggagagcagt gctcacccaa aaacagaaga 450  
 agcagcactc tgtcctgcac ctggttccca ttaacgccac ctccaaggat 500  
 gactccgatg tgacagaggt gatgtggcaa ccagctctta ggcgtgggag 550  
 aggcctacag gccaaggat atggtgtccg aatccaggat gctggagttt 600  
 atctgctgta tagccagggtc ctgtttcaag acgtgacttt caccatgggt 650  
 cagggtggtgt ctcgagaagg ccaaggaagg caggagactc tattccgatg 700  
 tataagaagt atgccctccc acccggaccg ggcctacaac agctgctata 750  
 gcgcagggtgt cttccattta caccaagggg atattctgag tgcataatt 800  
 ccccgggcaa gggcgaaact taacctctct ccacatggaa ccttcctggg 850  
 gtttgtgaaa ctgtgattgt gttataaaaa gtggctccca gcttggaaga 900  
 ccagggtggg tacatactgg agacagccaa gagctgagta tataaaggag 950  
 agggaatgtg caggaacaga ggcattctcc tgggtttggc tcccgttcc 1000  
 tcacttttcc cttttcattc ccaccccta gactttgatt ttacggatat 1050  
 cttgcttctg ttcccatgg agctccg 1077

<210> 76  
 <211> 250  
 <212> PRT  
 <213> Homo Sapien

<400> 76  
 Met Pro Ala Ser Ser Pro Phe Leu Leu Ala Pro Lys Gly Pro Pro  
 1 5 10 15  
 Gly Asn Met Gly Gly Pro Val Arg Glu Pro Ala Leu Ser Val Ala  
 20 25 30  
 Leu Trp Leu Ser Trp Gly Ala Ala Leu Gly Ala Val Ala Cys Ala  
 35 40 45  
 Met Ala Leu Leu Thr Gln Gln Thr Glu Leu Gln Ser Leu Arg Arg  
 50 55 60  
 Glu Val Ser Arg Leu Gln Gly Thr Gly Gly Pro Ser Gln Asn Gly  
 65 70 75  
 Glu Gly Tyr Pro Trp Gln Ser Leu Pro Glu Gln Ser Ser Asp Ala  
 80 85 90  
 Leu Glu Ala Trp Glu Asn Gly Glu Arg Ser Arg Lys Arg Arg Ala  
 95 100 105  
 Val Leu Thr Gln Lys Gln Lys Lys Gln His Ser Val Leu His Leu  
 110 115 120

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Pro | Ile | Asn | Ala | Thr | Ser | Lys | Asp | Asp | Ser | Asp | Val | Thr | Glu |
|     |     |     | 125 |     |     |     |     |     | 130 |     |     |     |     | 135 |
| Val | Met | Trp | Gln | Pro | Ala | Leu | Arg | Arg | Gly | Arg | Gly | Leu | Gln | Ala |
|     |     |     | 140 |     |     |     |     |     | 145 |     |     |     |     | 150 |
| Gln | Gly | Tyr | Gly | Val | Arg | Ile | Gln | Asp | Ala | Gly | Val | Tyr | Leu | Leu |
|     |     |     | 155 |     |     |     |     |     | 160 |     |     |     |     | 165 |
| Tyr | Ser | Gln | Val | Leu | Phe | Gln | Asp | Val | Thr | Phe | Thr | Met | Gly | Gln |
|     |     |     | 170 |     |     |     |     |     | 175 |     |     |     |     | 180 |
| Val | Val | Ser | Arg | Glu | Gly | Gln | Gly | Arg | Gln | Glu | Thr | Leu | Phe | Arg |
|     |     |     | 185 |     |     |     |     |     | 190 |     |     |     |     | 195 |
| Cys | Ile | Arg | Ser | Met | Pro | Ser | His | Pro | Asp | Arg | Ala | Tyr | Asn | Ser |
|     |     |     | 200 |     |     |     |     |     | 205 |     |     |     |     | 210 |
| Cys | Tyr | Ser | Ala | Gly | Val | Phe | His | Leu | His | Gln | Gly | Asp | Ile | Leu |
|     |     |     | 215 |     |     |     |     |     | 220 |     |     |     |     | 225 |
| Ser | Val | Ile | Ile | Pro | Arg | Ala | Arg | Ala | Lys | Leu | Asn | Leu | Ser | Pro |
|     |     |     | 230 |     |     |     |     |     | 235 |     |     |     |     | 240 |
| His | Gly | Thr | Phe | Leu | Gly | Phe | Val | Lys | Leu |     |     |     |     |     |
|     |     |     | 245 |     |     |     |     |     | 250 |     |     |     |     |     |

<210> 77  
 <211> 2849  
 <212> DNA  
 <213> Homo Sapien

<400> 77  
 cactttctcc ctctcttctt ttacttttcca gaaaccgcgc ttccgcttct 50  
 ggctgcagag acctcggaga ccgcgccggg gagacggagg tgctgtgggt 100  
 gggggggacc tgtggctgct cgtaccgccc cccaccctcc tcttctgcac 150  
 tgccgtcttc cggaagacct tttcccttgc tctgttttct tcaccgagtc 200  
 tgtgcatcgc cccggacctg gccgggagga ggcttgggcg gcgggagatg 250  
 ctctaggggg ggcgcgggag gagcgggcgg cgggacggag ggcccggcag 300  
 gaagatgggc tcccgtggac agggactctt gctggcgtac tgctgtctcc 350  
 ttgcctttgc ctctggcctg gtcttgagtc gtgtgccccca tgtccagggg 400  
 gaacagcagg agtgggaggg gactgaggag ctgccgtcgc ctccggacca 450  
 tgccgagagg gctgaagaac aacatgaaaa atacaggccc agtcaggacc 500  
 aggggctccc tgcttcccgg tgcttgcgct gctgtgacct cggtacctcc 550  
 atgtaccggg cgaccgccgt gcccagatc aacatcacta tcttgaaagg 600  
 ggagaagggt gaccgcggag atcgaggcct ccaagggaaa tatggcaaaa 650



caggctcagc agggggccagg ggccacactg gacccaaagg gcagaagggc 700  
tccatggggg cccctgggga gcggtgcaag agccactacg ccgccttttc 750  
ggtggggccg aagaagccca tgcacagcaa ccactactac cagacggtga 800  
tcttcgacac ggagttcgtg aacctctacg accacttcaa catgttcacc 850  
ggcaagttct actgctacgt gcccggcctc tactttctca gcctcaacgt 900  
gcacacctgg aaccagaagg agacctacct gcacatcatg aagaacgagg 950  
aggaggtggt gatcttggtc ggcaggtgg ggcaccgag catcatgcaa 1000  
agccagagcc tgatgctgga gctgagagag caggaccagg tgtgggtacg 1050  
cctctacaag ggcgaacgtg agaacgccat cttcagcgag gagctggaca 1100  
cctacatcac cttcagtggc tacctggtca agcacgccac cgagccctag 1150  
ctggccggcc acctccttcc ctctcgccac cttccacccc tgcgctgtgc 1200  
tgacccacc gcctcttccc cgatccctgg actccgactc cctggctttg 1250  
gcattcagtg agacgccttg cacacacaga aagccaaagc gatcggtgct 1300  
cccagatccc gcagcctctg gagagagctg acggcagatg aaatcaccag 1350  
ggcggggcac ccgcgagaac cctctgggac cttccgcggc cctctctgca 1400  
cacatcctca agtgaccccg cacggcgaga cgcgggtggc ggcagggcgt 1450  
cccaggggtg ggcaccgagg ctccagtcct tggaaataat taggcaaatt 1500  
ctaaagggtct caaaaggagc aaagtaaacc gtggaggaca aagaaaagg 1550  
ttgttatttt tgtctttcca gccagcctgc tggctcccaa gagagaggcc 1600  
ttttcagttg agactctgct taagagaaga tccaaagtta aagctctggg 1650  
gtcaggggag gggccggggg caggaaacta cctctggctt aattctttta 1700  
agccacgtag gaactttctt gagggatagg tggaccctga catccctgtg 1750  
gccttgccca agggctctgc tggctttctt ggtcacagc tgcgaggtga 1800  
tgggggctgg gggcccaggc gtcagcctcc cagagggaca gctgagcccc 1850  
ctgccttggc tccaggttgg tagaagcagc cgaagggtc ctgacagtgg 1900  
ccagggaccc ctgggtcccc caggcctgca gatgtttcta tgaggggcag 1950  
agtccttgg tacatccatg tgtggctctg ctccaccct gtgccacccc 2000  
agagccctgg ggggtggtct ccatgcctgc caccctggca tgggtttct 2050  
gtgccgcctc ccacacaaat cagccccaga agggcccggg gccttggctt 2100

ctgtttttta taaaacacct caagcagcac tgcagtctcc catctcctcg 2150  
 tgggctaagc atcaccgctt ccacgtgtgt tgtgttggtt ggcagcaagg 2200  
 ctgatccaga ccccttctgc cccactgcc ctcatccagg cctctgacca 2250  
 gtagcctgag aggggctttt tctaggcttc agagcagggg agagctggaa 2300  
 ggggctagaa agctcccgtt tgtctgtttc tcaggctcct gtgagcctca 2350  
 gtcctgagac cagagtcaag aggaagtaca cgtcccaatc acccgtgtca 2400  
 ggattcactc tcaggagctg ggtggcagga gaggcaatag cccctgtggc 2450  
 aattgcagga ccagctggag cagggttgcg gtgtctccac ggtgctctcg 2500  
 ccctgcccac ggccacccca gactctgac tccaggaacc ccatagcccc 2550  
 tctccacctc accccatggt gatgcccagg gtcactcttg ctaccgctg 2600  
 ggcccccaaa ccccgtctgc ctctcttctt tccccccatc cccacctgg 2650  
 ttttgactaa tctgtcttcc ctctctgggc ctggctgccg ggatctgggg 2700  
 tccttaagtc cctctcttta aagaacttct gcgggtcaga ctctgaagcc 2750  
 gagttgctgt gggcgtgcc ggaagcagag cgccacactc gctgcttaag 2800  
 ctccccagc tctttccaga aaacattaaa ctcagaattg tgttttcaa 2849

<210> 78  
 <211> 281  
 <212> PRT  
 <213> Homo Sapien

<400> 78  
 Met Gly Ser Arg Gly Gln Gly Leu Leu Leu Ala Tyr Cys Leu Leu  
 1 5 10 15  
 Leu Ala Phe Ala Ser Gly Leu Val Leu Ser Arg Val Pro His Val  
 20 25 30  
 Gln Gly Glu Gln Gln Glu Trp Glu Gly Thr Glu Glu Leu Pro Ser  
 35 40 45  
 Pro Pro Asp His Ala Glu Arg Ala Glu Glu Gln His Glu Lys Tyr  
 50 55 60  
 Arg Pro Ser Gln Asp Gln Gly Leu Pro Ala Ser Arg Cys Leu Arg  
 65 70 75  
 Cys Cys Asp Pro Gly Thr Ser Met Tyr Pro Ala Thr Ala Val Pro  
 80 85 90  
 Gln Ile Asn Ile Thr Ile Leu Lys Gly Glu Lys Gly Asp Arg Gly  
 95 100 105  
 Asp Arg Gly Leu Gln Gly Lys Tyr Gly Lys Thr Gly Ser Ala Gly



<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 81  
cccgggtgctt gcgctgctgt gacccccggtta cctccatgta cccgg 45

<210> 82  
<211> 2284  
<212> DNA  
<213> Homo Sapien

<400> 82  
gcggagcatc cgctgcggtc ctgcccgaga cccccgcgcg gattcgccgg 50  
tccttcccgc gggcgcgaca gagctgtcct cgcacctgga tggcagcagg 100  
ggcgccgggg tcctctcgac gccagagaga aatctcatca tctgtgcagc 150  
cttcttaaag caaactaaga ccagagggag gattatcctt gacctttgaa 200  
gacaaaaact aaactgaaat ttaaaatggtt cttcggggga gaagggagct 250  
tgacttacac ttggttaata atttgcttcc tgacactaag gctgtctgct 300  
agtcagaatt gcctcaaaaa gagtctagaa gatgttgtca ttgacatcca 350  
gtcatctctt tctaaggga tcagaggcaa tgagcccgtata taaacttcaa 400  
ctcaagaaga ctgcattaat tcttgctgtt caacaaaaaa catatcaggg 450  
gacaaagcat gtaacttgat gatcttcgac actcgaaaaa cagctagaca 500  
acccaactgc tacctatctt tctgtcccaa cgaggaagcc tgtccattga 550  
aaccagcaaa aggacttatg agttacagga taattacaga ttttccatct 600  
ttgaccagaa atttgccaag ccaagagtta cccaggaag attctctctt 650  
acatggccaa ttttcacaag cagtcactcc cctagcccat catcacacag 700  
attattcaaa gccaccgat atctcatgga gagacacact ttctcagaag 750  
tttggatcct cagatcacct ggagaaacta tttaagatgg atgaagcaag 800  
tgcccagctc cttgcttata aggaaaaagg ccattctcag agttcacaat 850  
tttctctga tcaagaaata gctcatctgc tgctgaaaa tgtgagtgcg 900  
ctcccagcta cgggtggcagt tgcttctcca cataccacct cggctactcc 950  
aaagcccgcc acccttctac ccaccaatgc ttcagtgaca ccttctggga 1000  
cttcccagcc acagctggcc accacagctc cacctgtaac cactgtcact 1050

0944403-083001

|             |             |             |             |             |      |
|-------------|-------------|-------------|-------------|-------------|------|
| tctcagcctc  | ccacgaccct  | catttctaca  | gttttttacac | gggctgcggc  | 1100 |
| tacactccaa  | gcaatggcta  | caacagcagt  | tctgactacc  | acctttcagg  | 1150 |
| cacctacgga  | ctcgaaaggc  | agcttagaaa  | ccataccgtt  | tacagaaatc  | 1200 |
| tccaacttaa  | ctttgaacac  | aggggaatgtg | tataacccta  | ctgcactttc  | 1250 |
| tatgtcaaat  | gtggagtctt  | ccactatgaa  | taaaactgct  | tcctgggaag  | 1300 |
| gtagggaggc  | cagtccaggc  | agttcctccc  | agggcagtgt  | tccagaaaat  | 1350 |
| cagtacggcc  | ttccatttga  | aaaatggctt  | cttatcggtt  | ccctgctctt  | 1400 |
| tgggtgtcctg | ttcctgggtga | tagggcctcgt | cctcctgggt  | agaatccttt  | 1450 |
| cggaaatcact | ccgcaggaaa  | cgttactcaa  | gactggatta  | tttgatcaat  | 1500 |
| gggatctatg  | tggacatcta  | aggatggaac  | tcggtgtctc  | ttaattcatt  | 1550 |
| tagtaaccag  | aagcccaa    | gcaatgagtt  | tctgctgact  | tgctagtctt  | 1600 |
| agcaggaggt  | tgtattttga  | agacaggaaa  | atgccccctt  | ctgctttcct  | 1650 |
| tttttttttt  | ggagacagag  | tcttgctctg  | ttgcccaggc  | tggagtgcag  | 1700 |
| tagcacgata  | tcggctctca  | ccgcaacctc  | cgtctcctgg  | gttcaagcga  | 1750 |
| ttctcctgcc  | tcagcctcct  | aagtatctgg  | gattacaggc  | atgtgccacc  | 1800 |
| acacctgggt  | gattttttgta | tttttagtag  | agacgggggt  | tcaccatggt  | 1850 |
| ggtcaggctg  | gtctcaaact  | cctgacctag  | tgatccaccc  | tcctcggcct  | 1900 |
| cccaaagtgc  | tgggattaca  | ggcatgagcc  | accacagctg  | gcccccttct  | 1950 |
| gttttatggt  | tggtttttga  | gaaggaatga  | agtgggaacc  | aaattaggtta | 2000 |
| attttgggta  | atctgtctct  | aaaatattag  | ctaaaaacaa  | agctctatgt  | 2050 |
| aaagtaataa  | agtataattg  | ccatataaat  | ttcaaaattc  | aactggcttt  | 2100 |
| tatgcaaaga  | aacagggttag | gacatctagg  | ttccaattca  | ttcacattct  | 2150 |
| tggttccaga  | taaaatcaac  | tgtttatatc  | aatttcta    | ggatttgctt  | 2200 |
| ttctttttat  | atggattcct  | ttaaaactta  | ttccagatgt  | agttccttcc  | 2250 |
| aattaaatat  | ttgaataaat  | cttttggttac | tcaa        | 2284        |      |

```
<210> 83
<211> 431
<212> PRT
<213> Homo Sapien
```

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Cys | Phe | Leu | Thr | Leu | Arg | Leu | Ser | Ala | Ser | Gln | Asn | Cys | Leu |     |
|     |     |     |     | 20  |     |     |     |     | 25  |     |     |     |     |     | 30  |
| Lys | Lys | Ser | Leu | Glu | Asp | Val | Val | Ile | Asp | Ile | Gln | Ser | Ser | Leu |     |
|     |     |     |     | 35  |     |     |     |     | 40  |     |     |     |     |     | 45  |
| Ser | Lys | Gly | Ile | Arg | Gly | Asn | Glu | Pro | Val | Tyr | Thr | Ser | Thr | Gln |     |
|     |     |     |     | 50  |     |     |     |     | 55  |     |     |     |     |     | 60  |
| Glu | Asp | Cys | Ile | Asn | Ser | Cys | Cys | Ser | Thr | Lys | Asn | Ile | Ser | Gly |     |
|     |     |     |     | 65  |     |     |     |     | 70  |     |     |     |     |     | 75  |
| Asp | Lys | Ala | Cys | Asn | Leu | Met | Ile | Phe | Asp | Thr | Arg | Lys | Thr | Ala |     |
|     |     |     |     | 80  |     |     |     |     | 85  |     |     |     |     |     | 90  |
| Arg | Gln | Pro | Asn | Cys | Tyr | Leu | Phe | Phe | Cys | Pro | Asn | Glu | Glu | Ala |     |
|     |     |     |     | 95  |     |     |     |     | 100 |     |     |     |     |     | 105 |
| Cys | Pro | Leu | Lys | Pro | Ala | Lys | Gly | Leu | Met | Ser | Tyr | Arg | Ile | Ile |     |
|     |     |     |     | 110 |     |     |     |     | 115 |     |     |     |     |     | 120 |
| Thr | Asp | Phe | Pro | Ser | Leu | Thr | Arg | Asn | Leu | Pro | Ser | Gln | Glu | Leu |     |
|     |     |     |     | 125 |     |     |     |     | 130 |     |     |     |     |     | 135 |
| Pro | Gln | Glu | Asp | Ser | Leu | Leu | His | Gly | Gln | Phe | Ser | Gln | Ala | Val |     |
|     |     |     |     | 140 |     |     |     |     | 145 |     |     |     |     |     | 150 |
| Thr | Pro | Leu | Ala | His | His | His | Thr | Asp | Tyr | Ser | Lys | Pro | Thr | Asp |     |
|     |     |     |     | 155 |     |     |     |     | 160 |     |     |     |     |     | 165 |
| Ile | Ser | Trp | Arg | Asp | Thr | Leu | Ser | Gln | Lys | Phe | Gly | Ser | Ser | Asp |     |
|     |     |     |     | 170 |     |     |     |     | 175 |     |     |     |     |     | 180 |
| His | Leu | Glu | Lys | Leu | Phe | Lys | Met | Asp | Glu | Ala | Ser | Ala | Gln | Leu |     |
|     |     |     |     | 185 |     |     |     |     | 190 |     |     |     |     |     | 195 |
| Leu | Ala | Tyr | Lys | Glu | Lys | Gly | His | Ser | Gln | Ser | Ser | Gln | Phe | Ser |     |
|     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |     |     | 210 |
| Ser | Asp | Gln | Glu | Ile | Ala | His | Leu | Leu | Pro | Glu | Asn | Val | Ser | Ala |     |
|     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |     | 225 |
| Leu | Pro | Ala | Thr | Val | Ala | Val | Ala | Ser | Pro | His | Thr | Thr | Ser | Ala |     |
|     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     |     | 240 |
| Thr | Pro | Lys | Pro | Ala | Thr | Leu | Leu | Pro | Thr | Asn | Ala | Ser | Val | Thr |     |
|     |     |     |     | 245 |     |     |     |     | 250 |     |     |     |     |     | 255 |
| Pro | Ser | Gly | Thr | Ser | Gln | Pro | Gln | Leu | Ala | Thr | Thr | Ala | Pro | Pro |     |
|     |     |     |     | 260 |     |     |     |     | 265 |     |     |     |     |     | 270 |
| Val | Thr | Thr | Val | Thr | Ser | Gln | Pro | Pro | Thr | Thr | Leu | Ile | Ser | Thr |     |
|     |     |     |     | 275 |     |     |     |     | 280 |     |     |     |     |     | 285 |
| Val | Phe | Thr | Arg | Ala | Ala | Ala | Thr | Leu | Gln | Ala | Met | Ala | Thr | Thr |     |
|     |     |     |     | 290 |     |     |     |     | 295 |     |     |     |     |     | 300 |
| Ala | Val | Leu | Thr | Thr | Thr | Phe | Gln | Ala | Pro | Thr | Asp | Ser | Lys | Gly |     |

09044403-083001

|                                     |                         |     |
|-------------------------------------|-------------------------|-----|
| 305                                 | 310                     | 315 |
| Ser Leu Glu Thr Ile Pro Phe Thr Glu | Ile Ser Asn Leu Thr Leu |     |
| 320                                 | 325                     | 330 |
| Asn Thr Gly Asn Val Tyr Asn Pro Thr | Ala Leu Ser Met Ser Asn |     |
| 335                                 | 340                     | 345 |
| Val Glu Ser Ser Thr Met Asn Lys Thr | Ala Ser Trp Glu Gly Arg |     |
| 350                                 | 355                     | 360 |
| Glu Ala Ser Pro Gly Ser Ser Ser Gln | Gly Ser Val Pro Glu Asn |     |
| 365                                 | 370                     | 375 |
| Gln Tyr Gly Leu Pro Phe Glu Lys Trp | Leu Leu Ile Gly Ser Leu |     |
| 380                                 | 385                     | 390 |
| Leu Phe Gly Val Leu Phe Leu Val Ile | Gly Leu Val Leu Leu Gly |     |
| 395                                 | 400                     | 405 |
| Arg Ile Leu Ser Glu Ser Leu Arg Arg | Lys Arg Tyr Ser Arg Leu |     |
| 410                                 | 415                     | 420 |
| Asp Tyr Leu Ile Asn Gly Ile Tyr Val | Asp Ile                 |     |
| 425                                 | 430                     |     |

<210> 84  
 <211> 30  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 84  
 agggaggatt atccttgacc tttgaagacc 30

<210> 85  
 <211> 18  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 85  
 gaagcaagtg cccagctc 18

<210> 86  
 <211> 18  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 86  
 cgggtccctg ctcttttg 18

<210> 87  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 87  
 caccgtagct gggagcgcac tcac 24

<210> 88  
 <211> 18  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 88  
 agtgtaagtc aagctccc 18

<210> 89  
 <211> 49  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 89  
 gcttcctgac actaaggctg tctgctagtc agaattgcct caaaaagag 49

<210> 90  
 <211> 957  
 <212> DNA  
 <213> Homo Sapien

<400> 90  
 cctggaagat gcgcccattg gctggtggcc tgctcaaggt ggtgttcgtg 50  
 gtcttcgcct ccttgtgtgc ctggtattcg gggtagctgc tcgcagagct 100  
 cattccagat gcacccctgt ccagtgtgc ctatagcatc cgcagcatcg 150  
 gggagaggcc tgcctcaaa gctccagtcc ccaaaaggca aaaatgtgac 200  
 cactggactc cctgcccatac tgacacctat gcctacaggt tactcagcgg 250  
 aggtggcaga agcaagtacg ccaaaatctg ctttgaggat aacctactta 300  
 tgggagaaca gctgggaaat gttgccagag gaataaacat tgccattgtc 350  
 aactatgtaa ctgggaatgt gacagcaaca cgatgttttg atatgtatga 400  
 aggcgataac tctggaccga tgacaaagtt tattcagagt gctgctccaa 450  
 aatccctgct cttcatggtg acctatgacg acggaagcac aagactgaat 500





|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Ala | Lys | Asn | Ala | Ile | Glu | Ala | Leu | Gly | Ser | Lys | Glu | Ile | Arg |
|     |     |     | 170 |     |     |     |     |     | 175 |     |     |     |     | 180 |
| Asn | Met | Lys | Phe | Arg | Ser | Ser | Trp | Val | Phe | Ile | Ala | Ala | Lys | Gly |
|     |     |     | 185 |     |     |     |     |     | 190 |     |     |     |     | 195 |
| Leu | Glu | Leu | Pro | Ser | Glu | Ile | Gln | Arg | Glu | Lys | Ile | Asn | His | Ser |
|     |     |     | 200 |     |     |     |     |     | 205 |     |     |     |     | 210 |
| Asp | Ala | Lys | Asn | Asn | Arg | Tyr | Ser | Gly | Trp | Pro | Ala | Glu | Ile | Gln |
|     |     |     | 215 |     |     |     |     |     | 220 |     |     |     |     | 225 |
| Ile | Glu | Gly | Cys | Ile | Pro | Lys | Glu | Arg | Ser |     |     |     |     |     |
|     |     |     | 230 |     |     |     |     |     | 235 |     |     |     |     |     |

<210> 92  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 92  
 aatgtgacca ctggactccc 20

<210> 93  
 <211> 18  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 93  
 aggcttgga ctccttc 18

<210> 94  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 94  
 aagattcttg agcgattcca gctg 24

<210> 95  
 <211> 47  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 95  
 aatccctgct cttcatggtg acctatgacg acggaagcac aagactg 47

<210> 96  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 96  
ctcaagaagc acgcgtactg c 21

<210> 97  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 97  
ccaacctcag cttccgcctc tacga 25

<210> 98  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 98  
catccaggct cgccactg 18

<210> 99  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 99  
tggcaaggaa tgggaacagt 20

<210> 100  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 100  
atgctgccag acctgatcgc agaca 25

<210> 101  
<211> 19  
<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 101

gggcagaaat ccagccact 19

<210> 102

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 102

cccttcgcct gcttttga 18

<210> 103

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 103

gccatctaatt tgaagcccat cttccca 27

<210> 104

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 104

ctggcggtgt cctctcctt 19

<210> 105

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 105

cctcggtctc ctcattctgtg a 21

<210> 106

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

094440-094440

[illegible]

tggcccagct gacgagccct 20

<211> 21

<213> Artificial Sequence

<223> Synthetic oligonucleotide probe

ctcataggca ctcggttctg g 21

<211> 19

<213> Artificial Sequence

<223> Synthetic oligonucleotide probe

tggtcccag cttggaaga 19

<211> 30

<213> Artificial Sequence

<223> Synthetic oligonucleotide probe

cagctcttgg ctgtctccag tatgtaccca 30

<211> 21

<213> Artificial Sequence

<223> Synthetic oligonucleotide probe

gatgcctctg ttctgcaca t 21

<211> 48

<213> Artificial Sequence

<223> Synthetic oligonucleotide probe

69

054440083001 E044450

ggattctaatacgcactcact atagggctgc ccgcaacccc ttcaactg 48

<210> 112  
<211> 48  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 112  
ctatgaaatt aaccctcact aaagggaccg cagctgggtg accgtgta 48

<210> 113  
<211> 43  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 113  
ggattctaatacgcactcact atagggccgc cccgccacct cct 43

<210> 114  
<211> 48  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 114  
ctatgaaatt aaccctcact aaagggactc gagacaccac ctgaccca 48

<210> 115  
<211> 48  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 115  
ggattctaatacgcactcact atagggccca aggaaggcag gagactct 48

<210> 116  
<211> 48  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic Oligonucleotide probe

<400> 116  
ctatgaaatt aaccctcact aaagggacta gggggtggga atgaaaag 48

<210> 117

<211> 48  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 117  
ggattctaatacgcactcactatagggccccctcgagctctcccgtgta 48

<210> 118  
<211> 48  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 118  
ctatgaaattaacctcactaaaggggaaggctcgccactggtcgtaga 48

<210> 119  
<211> 48  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 119  
ggattctaatacgcactcactatagggcaaggagccggggacccaggaga 48

<210> 120  
<211> 47  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 120  
ctatgaaattaacctcactaaagggagggggcccttggtgctgagt 47

0904403-083001